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Bucknell University Bulletin.

TWELFTH SERIES

JANUARY, 1913

No. 4



CATALOGUE

1912-1913



Published Bi-monthly by the Bucknell University,
Lewisburg, Pennsylvania.

Withdrawn

THE
SIXTY-THIRD CATALOGUE
OF THE
OFFICERS AND STUDENTS
OF
Bucknell University:
COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1912-1913

1140

DEPARTMENTS.

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CALENDAR.

The Winter Term Ends.....	Wednesday, March 19, 1913
The Spring Term Begins.....	Wednesday, March 26, 1913
Annual Commencement.....	Wednesday, June 18, 1913
The Fall Term Begins.....	Thursday, September 18, 1913
The Fall Term Ends.....	Wednesday, December 17, 1913
The Winter Term Begins.....	Tuesday, January 6, 1914

BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one million dollars. The productive investment amounts to over seven hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more, have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIETT BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE.

PATRONS are those who have given one thousand dol-

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lars or more, but less than ten thousand. (The names of Patrons will be published first in the Catalogue for 1914, by which time a complete list may be made up.)

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalogue of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees at its meeting in January, 1903, authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the loan fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large, active loan fund accumulates.

(f) A fund for the retirement of professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever.

ORGANIZATION.

The University comprises four schools:

I. THE COLLEGE offers nine Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence.
4. The Course in General Science.
5. The Course in Biology.
6. The Course in Chemical Engineering.
7. The Course in Civil Engineering.
8. The Course in Electrical Engineering.
9. The Course in Mechanical Engineering.

II. THE INSTITUTE for young women has three Courses of study, the General, the Classical, and the Scientific, leading to diplomas which admit to the Sophomore year in College.

III. THE ACADEMY is designed to fit young men for College, either for the Classical, Philosophical, Scientific, or Technological Courses.

IV. THE SCHOOL OF MUSIC has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

These schools are one corporation, have one President, who has general charge, with a Principal in more immediate charge of each of the subordinate departments. All expenses are met from funds in the hands of a common treasurer.

THE BOARD OF TRUSTEES.

CHAIRMAN, HARRY S. HOPPER, A.M.,

28 South Third Street, Philadelphia.

SECRETARY, A. JUDSON ROWLAND, D.D., LL.D.,

1701 Chestnut Street, Philadelphia.

TREASURER, DAVID PORTER LEAS, A.M.,

400 South Fortieth Street, Philadelphia.

ASSISTANT TREASURER, CALVIN A. HARE, A.M., Lewisburg.

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HON. E. A. ARMSTRONG, A.M.

JOHN P. CROZER, A.M.

COL. JOHN J. CARTER, A.M.

PRES. MILTON G. EVANS, D.D.

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HARRY S. HOPPER, A.M.

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GEORGE M. PHILIPS, PH.D., LL.D.

A. JUDSON ROWLAND, D.D., LL.D.

HON. JOSEPH C. SIBLEY, LL.D.

LEROY STEPHENS, D.D.

JAMES S. SWARTZ, A.M.

HON. F. J. TORRANCE, A.M.

HON. ERNEST L. TUSTIN, A.M.

CHARLES S. WALTON, A.M.

JOSEPH K. WEAVER, A.M., M.D.

MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January in Philadelphia.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION.

A. JUDSON ROWLAND, D.D., *Chairman.*

MILTON G. EVANS, D.D.	LINCOLN HULLEY, LL.D.
REV. LEROY STEPHENS, D.D.	HON. ERNEST L. TUSTIN, A.M.
GEORGE M. PHILIPS, PH.D., LL.D.	RALPH A. AMERMAN,
AND THE PRESIDENT.	

COMMITTEE ON FINANCE.

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DAVID PORTER LEAS, A.M.	JOHN P. CROZER, A.M.
HARRY S. HOPPER, A.M.	HON. JOSEPH C. SIBLEY, LL.D.
JOSEPH K. WEAVER, M.D.	HON. E. A. ARMSTRONG, A.M.
HON. FRANCIS J. TORRANCE, A.M.	CHARLES S. WALTON, A.M.,
AND THE PRESIDENT.	

COMMITTEE ON BUILDINGS AND LIBRARY.

HON. HAROLD M. McCLURE, A.M., *Chairman.*

GEN. CHARLES MILLER, A.M.	PRES. JOHN H. HARRIS, LL.D.
COL. JOHN J. CARTER, A.M.	

COMMITTEE ON PUBLICATION.

LEROY STEPHENS, D.D., *Chairman.*

DAVID PORTER LEAS, A.M.	MILTON G. EVANS, D.D.
AND THE PRESIDENT.	

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, and Museum of Natural History.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms.

Several thousand dollars have been expended recently in improving the College building.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Asso-

ciation, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College. In it all the students of the College meet daily for worship.

V. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D.C.L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred and fifty thousand volumes.

VI. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteenwire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

VII. THE CHEMICAL LABORATORY.

The Laboratory was erected in 1890, and is a building forty-three feet in width and eighty-six feet in length, with two stories above the basement. In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Organic Science; the basement has rooms for Applied Chemistry, and a fire-proof room. The attic contains a room for dissection in Human Anatomy.

VIII. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the

heating and lighting plant of the institution; the main story, with one room twenty by fifty and another forty by forty-five, is used for shop work.

IX. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the roof. At the height of twelve feet a running-track gallery, six feet wide, surrounds the room.

X. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XI. THE ACADEMY.

1. **The Main Building** of the Academy is situated on "College Hill," and is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Principal's office; on the second floor are suites of rooms for the Principal and his

family and for the Matron. The third floor is used for students' rooms, each twenty feet by twelve feet, and fourteen feet high.

2. The East Hall of the Academy is the Bucknell Cottage for young men, and is contiguous to the Main Building and connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet in width, and is finished in natural wood. The building contains a general study room, a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

Both buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

XII. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College, in the Institute, and in the School of Music.

1. The Main Building contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, music rooms, recitation rooms, and a dining hall; on the second floor a school-room and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. The South Hall, erected in 1869, is devoted to students' rooms, except the third story, which is used as a gymnasium. This gymnasium has been lately improved and equipped.

3. The Bucknell Cottage stands to the southwest of the Main Building, and is connected with it by an enclosed

passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and closets on either side. In this building is the **Studio**, a spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. New Cottage for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The **Calisthenium** occupies the upper story, and has a floor surface of over four thousand feet.

All the buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

5. The Campus of the Women's College is separated from the main College grounds by Loomis Street.

XIII. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XIV. THE PRESIDENT'S HOUSE.

The Corporation also owns a house for the use of the President of the University.

THE COLLEGE.

THE FACULTY AND OTHER OFFICERS.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

* FREEMAN LOOMIS, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES AND LITERATURE.

WILLIAM CYRUS BARTOL, A.M., PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

FRANK ERNEST ROCKWOOD, A.M., LL.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE AND DEAN OF
THE COLLEGE.

WILLIAM GUNDY OWENS, A.M.,
PROFESSOR OF CHEMISTRY.

ENOCH PERRINE, A.M., LITT.D.,
PROFESSOR OF THE ENGLISH LANGUAGE AND LITERATURE AND
SECRETARY OF THE FACULTY.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D.,
NEW JERSEY PROFESSOR OF THE GREEK LANGUAGE AND LITERATURE.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
PROFESSOR OF SOCIOLOGY AND ANTHROPOLOGY.

NELSON FITHIAN DAVIS, SC.D.,
PROFESSOR OF BIOLOGY.

* Retired.

EPHRAIM M. HEIM, PH.D.,
PROFESSOR OF ECONOMIC AND POLITICAL SCIENCE.

GUIDO CARL LEO RIEMER, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES.

LLEWELLYN PHILLIPS, A.M., D.D.,
JOHN P. CROZER PROFESSOR OF RHETORIC AND ORATORY.

CALVIN AURAND HARE, A.M.,
PROFESSOR OF CHRISTIAN EVIDENCES AND LOGIC.

THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY AND DEAN OF THE DEPARTMENT FOR WOMEN.

HENRY THOMAS COLESTOCK, A.M., PH.D.,
PROFESSOR OF HISTORY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND MECHANICAL DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FLOYD GEORGE BALLENTINE, PH.D.,
ASSISTANT PROFESSOR OF LATIN.

FRANK EUGENE BURPEE, A.M.,
ASSISTANT PROFESSOR OF MATHEMATICS.

MARTIN LINNAEUS DRUM, A.M.,
ASSISTANT PROFESSOR OF MATHEMATICS.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

GLENN VINTON BROWN, PH.D.,
ASSISTANT PROFESSOR OF CHEMISTRY.

BROMLEY SMITH, A.M.,
INSTRUCTOR IN ORATORY AND RHETORIC.

CHARLES EVANS, A.B.,
INSTRUCTOR IN GERMAN.

CHARLES CARPENTER FRIES, A.M.,
INSTRUCTOR IN RHETORIC.

HAROLD MURRAY McCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND NOTES AND ON AGENCY.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
LIBRARIAN.

JOSEPH MEIXELL WOLFE, A.M.,
REGISTRAR OF THE UNIVERSITY.

REV. CALVIN AURAND HARE, A.M.,
FINANCIAL SECRETARY.

FRANK EUGENE BURPEE, A.M.,
SUPERINTENDENT OF BUILDINGS AND GROUNDS.

ADMISSION OF STUDENTS.

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

I. GENERAL REQUIREMENTS.

Candidates for admission to any of the Courses must pass examination in the following:

1. ENGLISH (nine units).

a. Writing from dictation.

b. English Grammar.

c. Elements of Rhetoric—Invention, Style, and Punctuation.

d. A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. Reading.—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple

questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics; or Chemistry.

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's *Anabasis*;
 - e. Three Books of Homer's *Iliad*.
2. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*;
 - c. Ovid, 1200 lines.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the *Æneid*;
 - c. Ovid, 1200 lines.
2. SOLID GEOMETRY (one unit).
3. Any eight units selected from group E.

2. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's *Anabasis*;
 - e. Three Books of Homer's *Iliad*.
2. SOLID GEOMETRY (one unit).

3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the Course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN OR FRENCH.

The Grammar of the Language, Composition, and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates of Bucknell Institute, in any of the Courses, will be admitted to the Sophomore year of the corresponding Course in the College.

Graduates from Bucknell Academy, in any of the Courses, will be admitted to the corresponding Course in the College upon the Diploma of the Academy.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the **College Entrance Examination Board** are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be

admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismission. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his department that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismission given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismission be granted to any

student who has not discharged all his pecuniary obligations to the Institution. No papers of dismission or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismission are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers nine Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of which extends through two years of the Course and the latter through four years, and also twelve lecture Courses.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three Courses in German or French.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four Courses of German and French, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College Courses in either of the Ancient Classical languages or nine College Courses in a Modern language in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The course in Jurisprudence is designed for persons preparing for the

legal profession, for a business career, and for participation in public affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or French for admission and at least four Courses of college work in German or French as requisites for graduation.

V. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VI. The Course in Chemistry, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Science if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

VIII. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

IX. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

X. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- | | |
|-------------------------------|--------------|
| I. TERM—Solid Geometry, | Rhetoric, I, |
| Cicero de Senectute and Livy, | Oratory, I. |
| { Odyssey, | |
| { Greek Prose Composition, | |
| | |
| II. TERM—Higher Algebra, | Rhetoric, I, |
| Livy, | Oratory, I. |
| { Lysias' Orations, | |
| { Greek Testament, | |
| | |
| III. TERM—Trigonometry, | Rhetoric, I, |
| Velleius and Pliny, | Oratory, I. |
| { Plato's Apology, | |
| { Greek Testament, | |

SOPHOMORE YEAR.

- | | |
|-------------------|---------------|
| I. TERM—Rhetoric, | Astronomy, I, |
| Horace, | Oratory, I. |

ELECTIVE STUDIES:

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|----------------------|----------------------|
| German, | American History, a, |
| French, | Chemistry, |
| Greek History, | Surveying, |
| Analytical Geometry. | |

II. TERM—English Literature,
Demosthenes,

Astronomy, I,
Oratory, I.

ELECTIVE STUDIES:

Roman History,
American History, b,
Latin, 6,
German,
French,

Logic,
Chemistry,
Differential Calculus,
Advanced Algebra,
Physiology.

III. TERM—Civics, or Economic History, History of Art, I.

ELECTIVE STUDIES:

Public Address,
Argumentation,
Juvenal,
German,
French,

Anthropology,
Botany,
Chemistry,
Integral Calculus,
Elements of Law.

JUNIOR YEAR.

I. TERM { Psychology,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

Æschylus and Sophocles,
Latin, 8,
English, 6 or 7,
German,
French,
History, Oriental,
Economics,

Real Property,
Sociology,
Physiological Psychology,
Biology,
Embryology,
Chemistry,
Mechanics,

Geology.

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Advanced Composition,</i>
<i>English, 8,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Money and Banking,</i>	<i>Mathematics, 9,</i>
<i>Contracts,</i>	<i>Physics,</i>
<i>Municipal Government.</i>	

III. TERM—Theism, III,	History of Education, I,
History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Latin, 10,</i>	<i>Cryptogamic Botany,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Entomology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Constitutional Law,</i>	<i>Physics.</i>

SENIOR YEAR.

I. TERM	{ Social Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Greek, 15,</i>	<i>School Administration,</i>
<i>Greek Testament,</i>	<i>International Law,</i>
<i>Latin, 11,</i>	<i>Comparative Anatomy,</i>
<i>Anglo-Saxon,</i>	<i>Chemistry,</i>
<i>English, 4 or 9,</i>	<i>Geology,</i>
<i>German,</i>	<i>Geodetic Astronomy,</i>
<i>French,</i>	<i>Personal Property,</i>
<i>Medieval History,</i>	<i>Advanced Ethics.</i>

II. TERM	{ Political Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona,</i>	<i>Agency,</i>
<i>Greek Testament,</i>	<i>Philosophy of Mind,</i>
<i>Latin, 12,</i>	<i>History, 11,</i>
<i>Roman Life,</i>	<i>History of Europe, a,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Psychology of Education,</i>	<i>Economic Geology,</i>
<i>Human Anatomy, b.</i>	

III. TERM—Literature, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Philosophy of Education,</i>
<i>Greek Testament,</i>	<i>History of Europe, b,</i>
<i>Latin, 13,</i>	<i>Private Corporations,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspere,</i>	<i>Chemistry,</i>
<i>History of Philosophy,</i>	<i>Forestry,</i>
<i>Railroad Transportation.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

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|-------------------------------|--------------|
| I. TERM.—Higher Algebra, | Rhetoric, I, |
| Cicero de Senectute and Livy, | Oratory, I. |
| German or French, | |
| II. TERM.—Trigonometry, | Rhetoric, I, |
| Livy, | Oratory, I. |
| German or French, | |

III. TERM—Analytical Geometry, Velleius and Pliny, <i>German or French,</i>	Rhetoric, I, Oratory, I.
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SOPHOMORE YEAR.

I. TERM—Rhetoric, Horace,	Astronomy, I, Oratory, I.
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ELECTIVE STUDIES:

<i>German,</i>	<i>American History, a,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Greek History,</i>	<i>Surveying.</i>

II. TERM—English Literature, Astronomy, I.	Oratory, I,
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ELECTIVE STUDIES:

<i>Roman History,</i>	<i>Physiology,</i>
<i>American History, b,</i>	<i>Chemistry,</i>
<i>Latin, 6,</i>	<i>Differential Calculus,</i>
<i>German,</i>	<i>Advanced Algebra,</i>
<i>French,</i>	<i>Logic.</i>

III. TERM—Civics or Economic History,	History of Art, I.
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ELECTIVE STUDIES:

<i>Argumentation,</i>	<i>Anthropology,</i>
<i>Public Address,</i>	<i>Elementary Law,</i>
<i>Juvenal,</i>	<i>Botany,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Integral Calculus.</i>

JUNIOR YEAR.

I. TERM {	Psychology,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>Latin, 8,</i>	<i>Sociology,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English, 6 or 7,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
	<i>Mechanics.</i>

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Advanced Composition,</i>
<i>English, 8,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Advanced Logic,</i>	<i>Contracts.</i>

III. TERM—Theism, III,

History of Philosophy, II,

History of Education, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Entomology,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Cryptogamic Botany,</i>	<i>Physics,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM—Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 11,</i>	<i>School Administration,</i>
<i>German,</i>	<i>International Law,</i>
<i>French,</i>	<i>Personal Property,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>Medieval History,</i>	<i>Geology,</i>
<i>Advanced Ethics,</i>	<i>Geodetic Astronomy.</i>

- II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 12,</i>	<i>Roman Private Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Philosophy of Mind,</i>	<i>Economic Geology,</i>
<i>History of Europe, a,</i>	<i>Human Anatomy, b,</i>
<i>Psychology of Education,</i>	<i>Agency.</i>

- III. TERM—Literature, I.

ELECTIVE STUDIES:

<i>Latin, 13,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>History of Europe, b,</i>	<i>Forestry,</i>
<i>Bills and Notes,</i>	<i>Railroad Transportation.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

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|-------------------------|--------------|
| I. TERM—Higher Algebra, | Rhetoric, I, |
| Odyssey, | Oratory, I. |
| German or French, | |

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|------------------------|--------------|
| II. TERM—Trigonometry. | Rhetoric, I, |
| { Lysias' Orations, | Oratory, I. |
| { Greek Testament, | |
| German or French, | |

- III. TERM—Analytical Geometry, Rhetoric, I,
 { Plato's Apology, Oratory, I.
 { Greek Testament,
 German or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I,
 Greek History, Oratory, I.

ELECTIVE STUDIES:

American History, a, French,
German, Chemistry,
Surveying.

- II. TERM—English Literature, Astronomy, I,
 Demosthenes, Oratory, I.

ELECTIVE STUDIES:

German, Logic,
French, Physiology,
Roman History, Chemistry,
American History, b, Differential Calculus,
Advanced Algebra.

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Argumentation, Elements of Law,
Public Address, Botany,
German, Anthropology,
French, Chemistry,
Integral Calculus.

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 { Thesis,

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>Sociology,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English, 6 or 7,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Mechanics.</i>	

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English, 8,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Municipal Government,</i>	<i>Higher Analytics,</i>
<i>Advanced Logic,</i>	<i>Contracts,</i>
<i>Advanced Composition,</i>	<i>Municipal Sociology.</i>

III. TERM—	Theism, III,	History of Education, I,
	History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Entomology,</i>
<i>Journalism,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, 6,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Zoölogy of Vertebrates,</i>	<i>Physics,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek, 15,</i>	<i>Advanced Ethics,</i>
<i>Greek Testament,</i>	<i>School Administration,</i>
<i>Anglo-Saxon,</i>	<i>International Law,</i>
<i>English, 4 or 9,</i>	<i>Comparative Anatomy,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Geology,</i>
<i>Medieval History,</i>	<i>Personal Property.</i>

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona,</i>	<i>Agency,</i>
<i>Greek Testament,</i>	<i>Psychology of Education,</i>
<i>Chaucer,</i>	<i>Roman Life,</i>
<i>German,</i>	<i>Comparative Politics,</i>
<i>French,</i>	<i>Public Finance,</i>
<i>Philosophy of Mind,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Human Anatomy, b.</i>	

III. TERM—Literature, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Philosophy of Education,</i>
<i>Greek Testament,</i>	<i>Bills and Notes,</i>
<i>German,</i>	<i>History of Europe, b,</i>
<i>French,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
 { Odyssey,
 { Greek Prose Composition,
 or German,
 or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
 { Lysias' Orations,
 { Greek Testament,
 or German, or French,
- III. TERM—Analytical Geometry, Rhetoric, I,
 Velleius and Pliny, Oratory, I.
 { Plato's Apology,
 { Greek Testament,
 or German,
 or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Political Science, I,
 Horace, Oratory, I.

ELECTIVE STUDIES:

<i>Greek History,</i>	<i>Surveying,</i>
<i>American History, a,</i>	<i>Chemistry.</i>
<i>German,</i>	

- II. TERM—English Literature, Political Science, I,
 Logic, Oratory, I.

ELECTIVE STUDIES:

<i>Demosthenes,</i>	<i>American History, b,</i>
<i>Quintilian,</i>	<i>German,</i>
<i>Roman History,</i>	<i>French.</i>

- III. TERM—Elements of Law, Political Science, I,
American Constitutional Law.

ELECTIVE STUDIES:

<i>Juvenal,</i>	<i>American Literature,</i>
<i>German,</i>	<i>Argumentation,</i>
<i>French,</i>	<i>Public Address,</i>
<i>Economic History.</i>	

JUNIOR YEAR.

- I. TERM—Psychology, Blackstone, I.
Economics, Thesis.

ELECTIVE STUDIES:

<i>Real Property, Blackstone B.II,</i>	<i>Latin, 8,</i>
<i>Constitutional Limitations,</i>	<i>Greek Tragedy,</i>
<i>English History,</i>	<i>English Literature,</i>
<i>Sociology,</i>	<i>Modern Language.</i>

- II. TERM—Ethics, Blackstone, I.
Money and Banking, Thesis.

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Advanced Composition,</i>	<i>Modern Language.</i>

- III. TERM—Theism, Blackstone, I,
Private Corporations, Thesis.

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language.</i>

SENIOR YEAR.

- I. TERM—International Law, { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Personal Property,</i>	<i>Latin, 11,</i>
<i>Medieval History,</i>	<i>Modern Language,</i>
<i>Anglo-Saxon,</i>	<i>Advanced Ethics.</i>
<i>English Literature,</i>	

- II. TERM—Comparative Politics, { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Agency,</i>	<i>Demosthenes de Corona,</i>
<i>Public Finance,</i>	<i>Latin, 12,</i>
<i>Modern Europe, a,</i>	<i>Chaucer,</i>
<i>Philosophy of Mind,</i>	<i>Modern Language.</i>

- ### III. TERM—Roman Law.

ELECTIVE STUDIES:

<i>Bills and Notes,</i>	<i>Shakspere,</i>
<i>Railroad Transportation,</i>	<i>Plato's Phaedo,</i>
<i>Modern Europe, b,</i>	<i>Latin, 13,</i>
<i>History, 9,</i>	<i>Modern Language,</i>
<i>History of Philosophy.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

IV. THE GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
Latin, Oratory, I.
German, 2, or French,

II. TERM—Trigonometry,	Rhetoric, I,
Latin,	Oratory, I.
German, 3 or French,	

III. TERM—Analytical Geometry,	Rhetoric, I,
German, 4, or French,	Oratory, I.
Latin,	

SOPHOMORE YEAR.

I. TERM—Rhetoric,	Astronomy, I,
Oratory, I.	

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Greek History,</i>
<i>Horace,</i>	<i>American History, a,</i>
<i>German,</i>	<i>Surveying,</i>
<i>French.</i>	

II. TERM—English Literature,	Astronomy, I,
Oratory, I.	

ELECTIVE STUDIES:

<i>German,</i>	<i>Logic,</i>
<i>French,</i>	<i>Physiology,</i>
<i>Roman History,</i>	<i>Chemistry,</i>
<i>American History, b,</i>	<i>Differential Calculus,</i>
<i>Advanced Algebra.</i>	

III. TERM—Civics or Economic History,	History of Art, I.
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ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Elements of Law,</i>
<i>Argumentation,</i>	<i>Anthropology,</i>
<i>Juvenal,</i>	<i>Botany,</i>
<i>German,</i>	<i>Integral Calculus,</i>
<i>French,</i>	<i>Chemistry.</i>

JUNIOR YEAR.

I. TERM {	Psychology,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Sociology,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics.</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English, 8,</i>	<i>Advanced Composition,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English Bible,</i>	<i>Animal Histology, a,</i>
<i>History, English,</i>	<i>Human Anatomy, a,</i>
<i>Money and Banking,</i>	<i>Chemistry,</i>
<i>Municipal Government,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Contracts,</i>	<i>Physics.</i>

III. TERM—	Theism, III,	History of Education, I,
	History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Entomology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Chemistry,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM—	Social Ethics, I,	Thesis.
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ELECTIVE STUDIES:

<i>Anglo-Saxon,</i>	<i>Advanced Ethics,</i>
<i>English, 4 or 9,</i>	<i>International Law,</i>
<i>German,</i>	<i>Comparative Anatomy,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Medieval History,</i>	<i>Geology,</i>
<i>Personal Property,</i>	<i>Geodetic Astronomy,</i>
<i>School Administration.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>Psychology of Education,</i>
<i>French,</i>	<i>Roman Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>Philosophy of Mind,</i>	<i>Public Finance,</i>
<i>Modern Europe, a,</i>	<i>Chemistry,</i>
<i>History, 11,</i>	<i>Economic Geology,</i>
<i>Agency.</i>	

III. TERM—Literature, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

V. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

I. TERM—Algebra,	Rhetoric, I,
General Chemistry,	Oratory, I.
Latin, or German, 2,	
or French,	

II. TERM—Trigonometry,	Rhetoric, I,
General Chemistry,	Oratory, I.
<i>Latin or German, 3,</i>	
<i>or French,</i>	

III. TERM—Analytical Geometry,	Rhetoric, I,
Qualitative Chemistry,	Oratory, I.
<i>Latin or German, 4, or French,</i>	

SOPHOMORE YEAR.

I. TERM—Rhetoric,	Drawing, I,
Biology,	Scientific German, II.
Quantitative Chemistry,	

II. TERM—Invertebrate Zoölogy,	Drawing, I,
Physiology,	Scientific German, II.

ELECTIVE STUDIES:

<i>History,</i>	<i>English Literature,</i>
<i>Modern Language,</i>	<i>Chemistry,</i>
<i>Differential Calculus.</i>	

III. TERM—Vertebrate Zoölogy,	Drawing, I,
Botany,	Scientific German, II.

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Civics,</i>
<i>Anthropology,</i>	<i>English Literature,</i>
<i>Integral Calculus,</i>	<i>Modern Language.</i>

JUNIOR YEAR.

I. TERM—Psychology,	German Biology, I,
Mechanics,	Thesis.
<i>Physiological Psychology,</i>	
<i>Agricultural Chemistry,</i>	

II. TERM—Comparative Psychology,	German Biology, I,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Metallurgy,</i>	<i>Human Anatomy, a.</i>

III. TERM—Entomology,	German Biology, I,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language,</i>
<i>Neurology.</i>	

SENIOR YEAR.

I. TERM—Comparative Anatomy,	{ Social Ethics, I,
Embryology,		Thesis.

ELECTIVE STUDIES:

<i>Geology,</i>	<i>Modern Language,</i>
<i>Economics,</i>	<i>Chemistry,</i>
<i>History.</i>	

II. TERM—Histology,	{ Political Ethics, I,

ELECTIVE STUDIES:

<i>Human Anatomy, b,</i>	<i>History,</i>
<i>Economic Geology,</i>	<i>English Bible,</i>
<i>Money and Banking,</i>	<i>Modern Language,</i>
<i>Chemistry.</i>	

III. TERM—Neurology,	Forestry, I.
Bacteriology,	

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Literature,</i>
<i>Railroad Transportation,</i>	<i>English Bible,</i>
<i>Forestry,</i>	<i>Modern Language,</i>
<i>History.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VI. THE COURSE IN CHEMICAL ENGINEERING.

*Leading to the First Degree in Chemical Engineering.***FRESHMAN YEAR.**

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|---|-------------------------------|
| I. TERM—Chemistry,
Higher Algebra,
<i>Latin, German, 2, or French,</i> | Rhetoric, I,
Oratory, I. |
| II. TERM—Chemistry,
Trigonometry,
<i>Latin, German, 3, or French,</i> | Rhetoric, I,
Oratory, I. |
| III. TERM—Chemistry,
Analytical Geometry,
<i>Latin, German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Drawing, I,
Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Drawing, I,
Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | Drawing, I,
Shopwork, II. |

JUNIOR YEAR.

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|---|--|
| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | German Chemistry, I,
Chemical Thesis. |

- III. TERM—Organic Chemistry, German Chemistry, I,
 Spectrum Analysis, Chemical Thesis.
 Agricultural Chemistry, 2, or
 Boilers and Engines,

SENIOR YEAR.

- I. TERM—Physical Chemistry, { Social Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Geology,
- II. TERM—Physical Chemistry, { Political Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Direct Current Machinery, or
 Hydraulic Motors, or
 Economic Geology,
- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
 Alternating Current Machinery,
 or Water Supply and Sani-
 tary Engineering,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Drawing, Oratory, I.
 German, 2, or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Drawing, Oratory, I.
 German, 3, or French,

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| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |
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SOPHOMORE YEAR.

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| I. TERM—Rhetoric,
Surveying,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Descriptive Geometry,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |

JUNIOR YEAR.

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|--|-------------------------------------|
| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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|--|-----------------------------------|
| I. TERM—Bridges and Buildings,
<i>Geodetic Astronomy or</i>
<i>Geology or</i>
<i>Advanced Mechanics or</i>
<i>Electrical Measurements,</i> | { Social Ethics, I,
Thesis. |
| II. TERM—Hydraulic Motors,
Bridges and Buildings,
<i>Economic Geology or</i>
<i>Advanced Physics or</i>
<i>Direct Current Machinery,</i> | { Political Ethics, I,
Thesis. |

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| III. TERM—Bridges and Buildings, | Contracts and Specifications, I, |
| { Mine Surveying, | |
| { City Surveying, | |
| <i>Railroad Transportation or</i> | |
| <i>Advanced Physics or</i> | |
| <i>Alternating Current Machinery</i> | |
| <i>or Forestry,</i> | |
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VIII. THE COURSE IN ELECTRICAL ENGINEERING.

Leading to the First Degree in Electrical Engineering.

FRESHMAN YEAR.

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|--------------------------------|---------------|
| I. TERM—Higher Algebra, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 2, or French</i> | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 3, or French,</i> | |
| III. TERM—Analytical Geometry, | Rhetoric, I, |
| Drawing, | Shopwork, IV. |
| <i>German, 4, or French,</i> | |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric, | Shopwork, IV, |
| Mechanics, | Astronomy, I. |
| Chemistry, | |
| II. TERM—Differential Calculus, | Shopwork, IV, |
| Physics, | Astronomy, I. |
| Chemistry, | |
| III. TERM—Integral Calculus, | Shopwork, II, |
| Physics, | History of Art, I. |
| Chemistry, | |

JUNIOR YEAR.

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| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry</i> , or
<i>Theoretical Mechanics</i> , | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |
| III. TERM—Alternating Current Machinery,
Advanced Physics,
Boilers and Engines, | Machine Design
and Tools, I,
Thesis. |

SENIOR YEAR.

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|--|-----------------------------------|
| I. TERM—Design of Electrical Machinery,
Electrical Generating Stations and Transmission,
Graphical Analysis of Structures, | { Social Ethics, I,
Thesis. |
| II. TERM—Design of Electrical Machinery,
Telegraphs, Telephones,
Signaling Apparatus,
Hydraulic Motors, | { Political Ethics, I,
Thesis. |
| III. TERM—Electric Lighting,
Electric Railways,
Water Supply and Sanitary Engineering, | Contracts and Specifications, I. |

IX. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

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| I. TERM—Advanced Algebra,
Drawing,
<i>German, 2, or French</i> , | Rhetoric, I,
Shopwork, II. |
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| II. TERM—Trigonometry,
Drawing,
<i>German, 3, or French,</i> | Rhetoric, I,
Shopwork, II. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric,
Mechanics,
Chemistry, | Shopwork, IV,
Astronomy, I. |
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Shopwork, IV,
Astronomy, I. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | Shopwork, IV,
History of Art, I. |

JUNIOR YEAR.

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|---|-------------------------------------|
| I. TERM—Electrical Measurements,
Descriptive Geometry,
Strength of Materials, | Shopwork, IV,
Machine Design, I. |
| II. TERM—Direct Current Machinery,
Thermo-Dynamics,
Metallurgy, | Shopwork, IV,
Machine Design, I. |
| III. TERM—Alternating Current
Machinery,
Thermo-Dynamics,
Boilers and Engines, | Shopwork, IV,
Machine Design, I. |

SENIOR YEAR.

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|--|---|
| I. TERM—Steam Engineering (49),
Design of Electrical Machinery,
Bridges and Buildings, | { Social Ethics, I,
Thesis,
Shopwork, IV. |
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- II. TERM—Steam Engineering (50),
Design of Electrical Machinery,
Hydraulic Motors,
- { Political Ethics, I,
Thesis,
Shopwork, IV.
- III. TERM—Steam Engineering (51),
Electric Lighting,
Water Supply and Sanitary Engineering,
- Contracts, I,
Shopwork, IV.

DEPARTMENTS OF INSTRUCTION

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented practically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D.,
PROFESSOR OF PSYCHOLOGY AND ETHICS.

CALVIN AURAND HARE, A.M.,
PROFESSOR OF CHRISTIAN EVIDENCES AND LOGIC.

THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY.

The studies in this department embrace Psychology, Philosophy, Ethics, Theism, and Pedagogy.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Lotze, Grundzüge der Psychologie.** Seniors and Juniors. Minor. Two hours.

4. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

5. **Logic, Deductive and Inductive.** Second term, five hours.
—PROFESSOR HARE.

6. **Scientific Method, with Exercises in Analysis.** Seniors and Juniors. Second term, five hours.—PROFESSOR HARE.

7. **Argumentation.** Baker's *Principles of Argumentation*. Briefs, forensics, and oral discussion. Third term. (Rhetoric, 3.)—PROFESSOR PHILLIPS.

8. **History of Philosophy.** Lectures. Required of Juniors. Third term, two hours.

9. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

10. **Roman Philosophy** (Latin 8). Elective to Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **Philosophy.** Jerusalem. Third term, five hours.

12. **Ethics.** Required of Juniors. Second term, five hours.

13. **Social Ethics—Domestic Relations.** Lectures. Required of Seniors. First term, one hour.

14. **Political Ethics—Duties of Citizenship.** Lectures. Required of Seniors. Second term, one hour.

15. **Ethics of Plato and Aristotle.** Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

16. **Philosophy of Religion.** Required of Juniors. Third term, three hours.

17. **Evidences of Christianity.** Elective to Seniors. Second term, five hours.—PROFESSOR HARE.

18. **Comparative Religion.** Elective to Seniors and Juniors. Second term, five hours; alternating with 17.—PROFESSOR HARE.

EDUCATION.

19. **History of Education.** A general sketch of educational Theory and Practice in Ancient and Modern times. Lectures. Required of Juniors. Third term, one hour.—PROFESSOR EDWARDS.

20. **Psychology of Education.** Based on Harris' *Psychologic Foundations of Education*. Elective to Seniors and Juniors. Third term, five hours.—PROFESSOR EDWARDS.

21. **Comparative and Child Psychology.** Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

22. **Philosophy of Education.** Based on Horne's Philosophy of Education. Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR EDWARDS.

23. **School Administration.** High School organization, function and management; discussion of methods; survey of College Entrance Requirements. First term, five hours.—PROFESSOR EDWARDS.

24. **Teachers' Course in American History.** Methods of teaching History with special reference to the work of secondary schools. Second term, two hours.—PROFESSOR COLESTOCK.

25. **Teachers' Course in Greek.** The Anabasis and Iliad are used as text. The preparatory work is reviewed, and suggestions made regarding methods of teachings. Some informal lectures are also given regarding the first year's work in Greek. First term, five hours. Seniors and Juniors.—PROFESSOR HAMBLIN.

26. **Teachers' Course in Latin.** Special topics in grammar, with practical exercises in Caesar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR ROCKWOOD.

27. **Teachers' Course in English.** Designed to familiarize the student with the authors required for entrance to college.—PROFESSOR PERRINE.

28. **Teachers' Course in Mathematics.** Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools: reforms in arithmetical teaching. (b) Algebra: Its growth during the last three centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Philosophy of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who

may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

II. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT.
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND AGENCY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History* and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B. I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—MR. JOHNSON.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—MR. JOHNSON.

5. **Contracts.** Text-book, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-book, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—JUDGE MCCLURE.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** Third term, Seniors and Juniors.—PROFESSOR HAMBLIN.

13. **Constitutional Limitations.** Cooley's Constitutional Limitations and Cases.—PROFESSOR HEIM.

14. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

15. **Moot courts** are held in which an attorney-at-law and a student sit as judges, and students, deputed to represent the respective sides, present their arguments. The presiding student writes the opinion of the court.

III. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. **Corporate Finance and Commercial Law.** Organization and Management of Corporations. Corporation Finance. Form and

Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. Transportation and Commerce. Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. Economics. Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. American Civics. A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. American Constitutional Law. Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.—PROFESSOR HAMBLIN.

10. Constitutional Limitations. The Constitutional Law of the American Commonwealth. The sphere of Civil Rights in relation of the exercise of governmental power through the criminal law, the police power, the taxing power, and the power of eminent domain.

11. Comparative Politics. A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

12. Municipal Government. Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

13. International Law. First term, five hours. Seniors and Juniors.

14. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one

hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

15. Political Science. Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

16. American Diplomacy. Minor Course, two hours.

IV. DEPARTMENT OF SOCIOLOGY.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. Anthropology, Descriptive and Physical. Elective to Sophomores. Third term, five hours.

2. Sociology, Principles and Theory. Elective to Seniors and Juniors. First term, five hours.

3. Charities and Reform. Seniors and Juniors. Second term, one hour. Prerequisite Course 2.

4. Municipal Sociology. Seniors and Juniors. Second term, five hours.

5. History of Art. Lectures. Sophomores. Third term, one hour.

V. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. Oriental History. A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. Hebrew History and Literature. Second term, five hours.—PROFESSOR PHILLIPS.

3. New Testament History and Literature. Third term, five hours.—PROFESSOR PHILLIPS.

4. Greek Political and Constitutional History. First term, five hours.—PROFESSOR HAMBLIN.

5. Roman History. Second term, five hours.—PROFESSOR ROCKWOOD.

6. Roman Private Life. Second term, five hours.—PROFESSOR BALLENTINE.

7. Medieval Europe. General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.

8. Modern Europe to 1789. From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.

9. Modern Europe since 1789. The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.

10. History of England, a. Political and industrial development of the English people from the earliest times. Second term, five hours.

11. Constitutional History of England, b. With especial reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.

12. American Colonial History, a. European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.

13. American Constitutional History, b. Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.

14. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. Teachers' Course in American History. General survey of American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VI. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

There are four terms of required work in Greek in the Classical Course, and five in the Greek Philosophical Course; while Greek may be taken as an elective during the entire Junior and Senior years. Besides the Elective Courses a number of Minor Courses are offered. In the Elective Courses a year of poetry alternates with a year of prose. A course of New Testament Greek, designed especially for candidates for the ministry and extending through the Senior year, is given by Professor Phillips.

1. **Homer.** *Odyssey*, Books 5-8. Review of verb forms and syntax of verbs. Epic forms and styles. Word lists. Metre. First term, Freshman year.

2. **Lysias.** Six orations. Inflection and syntax of nouns. Prose composition. Attic oratory. Translation at sight and hearing. Second term, Freshman year.

3. **Plato.** *Apology* and selections. Special topics in Greek Syntax. Philosophy and influence of Socrates. The Sophists. Extracts from the *Memorabilia* at sight. Third term, Freshman year.

4. **Greek Political and Constitutional History.** Bury's *History of Greece* is used as a text-book. The class is also required to do collateral reading on important epochs. First term, Sophomore year.

5. **Demosthenes.** *Olynthiacs* and *Philippics*. History and Politics of the Macedonian period. Style of Demosthenes. Second term, Sophomore year.

6. **Æschylus and Sophocles.** *Prometheus Bound* and *Œdipus Tyrannus*. The drama, theatre, and metres. First term in alternate years.

7. **Euripides and Aristophanes.** *Medea* and *The Clouds*.

Greek Comedy. Religious influence of the poets. Influence of the Classical on the Modern Drama. Second term in alternate years.

8. Greek Literature in English. A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

9. Demosthenes. *De Corona*. The oratory of Demosthenes, from a literary and political point of view. *Æschines* against Ctesiphon at sight. Second term, Seniors and Juniors; alternating with 6.

10. Plato. *The Phædo*. Greek Philosophy. The influence of Plato. Third term, Seniors and Juniors; alternating with 7.

11. New Testament Greek. The Gospel according to Luke. Hellenistic Greek. Second and third terms, Freshman year; one hour a week.

12-14. New Testament Greek. Translation of the synoptic Gospels; interpretation; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Three terms. Elective to Seniors.—PROFESSOR PHILLIPS.

15. Teachers' Course in Greek. The *Anabasis* and *Iliad* are used as text-books. Thus the Preparatory work may be reviewed, and suggestions received regarding the methods of teaching. Some informal lectures are also given regarding the first year's work in Greek. First term, Seniors and Juniors.

16. Xenophon. *The Symposium* and *Œconomicus*. Sophomores and Freshmen. Winter terms in alternate years, one hour.

17. Homer and Lucian. Selections from each in alternate years. Sophomores and Freshmen. Third term, one hour.

18. Xenophon and *Æschines*. The *Memorabilia* and the oration against Ctesiphon, in alternate years. Seniors and Juniors, first term, one hour.

19. Sophocles and the Lyric Poets. *Antigone* and selections from the Lyric Poets in alternate years. Seniors and Juniors, second term, one hour.

VII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

FLOYD GEORGE BALLENTINE, PH.D., ASSISTANT PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (*selected speeches*) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. **Cicero.** *De Senectute.* Livy, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. **Livy.** Books XXI, and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. **Velleius.** Roman History. Pliny. Selections from the Epistles. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. **Horace.** Selections from the Odes, Satires, and Epistles. Prosody; Historical Outlines of the Latin Language and Literature; Wilkins' Primer; Lectures. First term, Sophomore year, two divisions.

5. **Roman History.** The work is based on Meyer's Rise and Fall of Rome. Mommsen, Bury and Gibbon are used for supplementary reading. Second term, Sophomore year.

6. **Quintilian.** Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. **Juvenal.** Selected Satires. Third term; open to those who have taken Course 4.

8. **Roman Philosophy.** Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. **Plautus and Terence.** Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term; open to Seniors and Juniors; alternating with 14.

10. **Latin Inscriptions.** Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus.** Annals. Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Caesar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.

17. **Classical Philology.** Introductory Course, one hour.

VIII. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature, Introductory Course.** Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, second term, Sophomore.

2. **English Literature from 1832.** For those who have taken Course 1, and alternating with Course 13.

3. **English Literature, 1790-1832:** Wordsworth, Coleridge, Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.

4. **English Literature, 1614-1790.** For those who have taken Course 1, and alternating with Course 15.

5. **English Literature, 1600-1660.** For those who have taken Course 1, and alternating with Course 8.

6. **Shakspeare.** Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.

7. **Shakspeare.** His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.

8. **The English Drama.** Its development from the earliest times to Shakspeare. For those who have taken Course 1, and alternating with Course 5.

9. **Teachers' Course in English.** Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to college. For those who have taken Course 1, and alternating with Course 10.

10. **Principles of Literary Criticism.** For Seniors and Juniors, alternating with Course 9.

11. **American Literature,** with special reference to the national period. For those who have taken Course 1; alternating with Course 12.

12. **Journalism,** a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For those who have taken Course 1.

13. **Anglo-Saxon.** Old English Language and Literature, with special elective in *Beowulf*. For those who have taken Course 1 and the required work in German.

14. **Chaucer.** Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's *The English Language*. For those who have taken Course 1 and the required work in French.

15. **Modern English.** Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.

16. **Foreign Literature in English.** Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course, lectures are given on Modern English Fiction.

17. **Periods of English Literature.** Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. *Le Publique et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut. Minor.*

19. **Shakspeare.** Fünf Vorlesungen von Bernhard ten Brink. Minor.

IX. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

BROMLEY SMITH, A.M., INSTRUCTOR IN RHETORIC AND ORATORY.

CHARLES CARPENTER FRIES, A.M., INSTRUCTOR IN RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. **Rhetoric and English Composition.** Introductory Course. Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen.

Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. **English Composition.** Daily themes, recitations, and consultations. First term, five hours. Required of Sophomores.

3. **Argumentation.** Baker's *Principles of Argumentation*. Briefs, forensics and oral discussion. Third term. Open to students who have passed in 1 and 2.

4. **English Composition.** *Advanced Course.* Wendell's *English Composition*. Daily and fortnightly themes, recitations, and consultations. Second term; five hours. Open to Seniors and Juniors.

5. **Theses.** Every member of the Junior and the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement ora-

tions. The subjects of the theses are presented to the Professor of Rhetoric before October 22, and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in Structure. Two hours.

7. **English Prose.** Studies in the Principles of Style. Two hours.

8. **Teachers' Course.** The theory and practice of Rhetoric and Composition. Carpenter, Baker, and Scott. The teaching of English. Five hours. Open to students who have attained an average grade of nine in Courses 1, 2, and 4.

9. **The Theory of Rhetoric.** A study of the laws of thought.

10. **Movements of Thought in the Nineteenth Century.** Methods of investigation; theses. Open to Seniors.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory, aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. **Public Speaking.** Delivery of complete orations illustrating and applying the principles studied in the first and second terms.

A prize is offered to the young man and one to the young woman of the Freshman Class who excels in the delivery of these orations. Required, third term.

SOPHOMORES.

4. Public Speaking. Close analysis and study of the details of public speaking; study of the various styles of delivery and of the different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. Public Speaking. Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second term, one hour.

6. Public Speaking. Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. Public Address. The various forms of addressing the public are studied. Beginning with open letters and editorials, the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens from the above forms. Third term, five hours; Sophomores.

8. Practical Oratory. Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. Interpretative Reading. The use of the voice in bringing out the meaning of the best literature is obtained by practice in

class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors. (Counts as Minor.)

JUNIORS.

10. Prize Contest. A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in composition and elocution as shown during the preceding terms of the college course.

11. Prize and Honor Debate. During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. Oral Debates. Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. Honors in Debating. During the year an elective course in debating is offered to Seniors. The last debate is public.

14. Prize in Oratory. A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

X. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

CHARLES EVANS, A.B.,
INSTRUCTOR IN GERMAN.

A.—GERMAN

1. Elementary Course. Grammar; German Prose; practice in writing German. Three terms.

2. German Prose. Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. **German Prose and Poetry.** Grammar; practice in writing German. Elective Course for those who have taken Course 2.

4. **Historical German Prose.** Practice in writing German. Elective Course for those who have taken Course 3.

5. **Modern German Novelists.** Practice in writing German. Elective Course for those who have taken Course 4.

6. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

7. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.

8. **Goethe.** Practice in writing German; lectures. Elective Course for those who have taken Courses 5-7.

9. **Goethe.** Shorter Poems, Dichtung und Wahrheit, Faust I; lectures. Elective Course for those who have taken Course 8.

10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken Course 9.

11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with Course 8.

12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with Course 9.

13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with Course 10.

14. **Lotze.** Grundzüge der Psychologie. (Philosophy 3.)

15. **German Biological Science.** (Biology 21.)

16. **German Chemical Science.** (Chemistry 16.)

17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B.—FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.

2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken Course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken Course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken Course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken Course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken Course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken Course 6.

8. **Authors of the XVIII Century.** Practice in writing French; lectures. Elective Course for those who have taken Course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective Course for those who have taken Course 8.

C.—SPANISH.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. Elective Course, for Seniors and Juniors. First term, five hours.

2 and 3. **Spanish Prose.** Translation, Composition, Conversation. Elective Course, for Seniors and Juniors. Second and third terms, five hours.

D.—ITALIAN.

Special instruction for engineering students in Italian Grammar and Conversation.

XI. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M., ASSISTANT PROFESSOR.

MARTIN LINNAEUS DRUM, SC.M.,
ASSISTANT PROFESSOR OF MATHEMATICS AND SURVEYING.

JOHN RALPH BOGERT, ASSISTANT IN SURVEYING.

CLAYTON ELMER PHILLIPS,
ASSISTANT IN DRAWING.

EARL BALLARD GLOVER,
JAMES RALPH IRWIN.
ASSISTANTS IN SHOPWORK.

HARTLEY CARR POWELL, ASSISTANT IN PHYSICS.

1. **Solid Geometry.** The Course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differentiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. **Trigonometry.** The Course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. **Analytical Geometry.** The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The Course is intended to give a clear concep-

tion of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. **Higher Analytical Geometry.** The Course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior year, first term, five hours.

7. **Differential Calculus.** The Course includes high derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

8. **Integral Calculus.** The Course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and applications to problems in Physics and Mechanics. Sophomore year, third term, five hours.

9. **Differential Equations.** A Course with mechanical applications. Senior year, first term, five hours.

10. **Descriptive Astronomy.** The aim of the Course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science Courses, first and second terms, one hour.

11. **General Astronomy.** The subject is taught by text-book, with illustrations in the observatory. The students have free use of the ten-inch equatorial telescope. Third term, five hours.

12. **Geodetic Astronomy.** The Course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic determination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites, a Course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

13. **Plane and Topographical Surveying.** Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text. Lectures, tests. Field practice in each position on corps using transit, Y, dumpy and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

14. **Geodetic Surveying.** Minor Course. Sophomore Civil Engineering, one hour throughout the year.

15. Railroad Surveying. Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary survey for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixing grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

16. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

17. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

18. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids, and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses, Sophomore year, second term, five hours, and Junior year, first term, five hours.

19-21. Courses in Drawing. Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A Course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

22. Architectural Design. The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

23-25. General Physics. (Three terms.) These Courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) **Electricity and Magnetism.** Second term.

(3) **Acoustics and Optics.** Third term.

26-29. Advanced Physics. The Course extends throughout the year and assumes that the student has completed Courses 23-25 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Laboratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

26. Electrical Measurements. In this Course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied

with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

27. Heat. A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous-flow calorimeter and the Rowland apparatus.

28. Light. The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly and Lummer-Brodhun screens.

29. Spectrum Analysis. Recitation one hour, Laboratory eight hours per week.

Comparison, observation and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and miners; spark and arc spectra of solids; spark and flame spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva Society, prisms of all types by the best foreign makers, absorption cells, etc.

30. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

31. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

32-34. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

35. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

36. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurement of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

37. Water Supply and Sanitary Engineering. Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of streams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

38. Contracts. In this Course are given the principles of Common Law as applied to contracts. Third term, Senior Engineering, one hour.

39. Theoretical Mechanics. Differential and integral calculus are required for admission to this Course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of ma-

chinery, work, energy, friction, and impact. Juniors, first term, five hours.

40. Direct Current Machinery. This Course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurement of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

41. Alternating Current Generators, Transformers and Motors. Electromotive force and current curves are traced, and their modifications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation, and general performance of alternating current apparatus are studied in detail. This Course must be preceded by the Course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

42. Design of Electrical Machinery. During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the Course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lectures, computing exercises, drawing and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

43. Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries. Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of secondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

44. Telegraph, Telephone, Railway Signal and Related Apparatus. Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, Electrical Engineering, second term, five hours.

45. Electric Lighting, Construction, Wiring and Economics. The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

46. Electric Railways, Construction, Operation and Economics. This Course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

47. Machine Design, Machine Tools. Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

48. Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors. This is a general Course dealing with the thermodynamics of the heat engine, the theoretical, indicated and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proximate and ultimate analyses. A large number of problems relating to steam engines, boilers and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, Engineering all Courses, third term, five hours.

49, 50, 51. Steam Engineering. Senior year, Mechanical Engineering, five hours, through the year.

49. Steam Engines and Turbines. In this Course the different types of steam engines and turbines are carefully studied, going more into detail than in Course 48, special attention being given to the moving parts such as valves, valve-gears, etc. Also the various economizing appliances and their effect upon the cost of producing power are taken up. The class-room work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

50. Boilers. A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

51. Steam Engine Design. This Course follows very closely Course 49, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the class-room, each student is required to design and draw the parts for a steam engine of given size. Third term.

52-54. Shopwork. In Mechanical Engineering, shopwork is required of students throughout the four years of the Course. In Civil, Electrical and Chemical Engineering, it is required throughout the Sophomore year. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four Courses are given, each extending through a year.

52. Wood-working. The Course in wood-working consists of carpentry, cabinet work and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

52. Pattern-making and Moulding. A general Course covering pattern-making, simple moulding and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes and electric motors are made and assembled during the Course. Sophomore year, all Engineering Courses, four hours.

54. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history and design being discussed. Each student is required to design the parts, make the patterns and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

55. Steam Engine. The work in this Course is similar to that in Course 53, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

XII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D., ASSISTANT PROFESSOR.

EARLE BUDD ARMSTRONG, ASSISTANT.

The Courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigation and to train the student in the various methods of chemical research. The Courses as a whole are offered to those who expect to teach chemistry or enter the testing or industrial laboratory. As chemistry is at the foundation of the natural sciences, the first Courses are essential to the study of science and medicine, and are important for general culture.

1. **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. **Qualitative Analysis.** In the first part of the term chemical reactions are studied in the laboratory, class-room, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite Courses 1 and 2.

4, 5, 6. **Quantitative Analysis.** This Course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy and water are studied.

(3) In the third term, Fire, Gas and Electro-chemical methods are practiced.

7, 8, 9. **Organic Chemistry.** Prerequisites, Courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Carius' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later, polycyclic and heterocyclic compounds; terpens and camphors are taken up. In the laboratory, preparations of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) Organic Preparations. Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) Organic Preparations. A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas laws, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermo-dynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) Third term. Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity,

migration of iron, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. Chemical Preparations. Prerequisites, Courses 1, 2, and 3. Laboratory Course; ten hours per week.

(1) First term. Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) Second term. Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Arc-furnace work is later taken up. Relations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. Industrial Chemistry. A series of lectures and recitations upon the most important technical chemical operations exclusive of metallurgy. A study of the application of chemical principles, technical processes, and the mechanical methods of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, Courses 1, 2, and 3.

17. Metallurgy. The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, Courses 1, 2, and 3.

18. Agricultural Chemistry. The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This Course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, Courses 1, 2, and 3.

19. German Chemical Literature. One hour a week, throughout the year. Prerequisites, at least two terms of German, and Courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are

read, and study is made of the derivation and formation of scientific words.

20. **Physical Chemistry.** Mathematical topics.

21. **Organic Research.**

22. **History of Chemistry.**

XIII. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR OF BIOLOGY.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

GEORGE FRANCIS REITER,
H. WALTER BAKER,
ASSISTANTS.

It is the constant aim in this department to teach how to interpret nature. The student is guided in his investigations by lectures and laboratory manuals.

1. **Animal Physiology.** The aim of this Course is to acquaint the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The Course is intended for those who wish a general knowledge of Physiology.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors.

3. **Comparative and Child Psychology.** Text-book, reports. Elective to Seniors and Juniors.

4. **Sanitary Science.** Lectures, one hour a week through the year.

5. **Human Osteology and Comparative Anatomy.** Recitations and dissections. In this Course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. **Human Anatomy.** Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second Course, similar to 6a.

7. Normal Histology (a). Recitations and lectures, and laboratory work. In this Course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining and sectioning.

8. Normal Histology (b). A continuation of Course 7.

9. Embryology. Recitations, lectures, and laboratory work. This Course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds and mammals.

10. Biology. Recitations and dissections. The aim of this Course is to meet the needs of general education in this subject, and at the same time makes clear the fundamental principles, scope, method, history, and subdivisions of Biology and its relations to other sciences.

11. Invertebrate Zoölogy. Recitations and dissections. This Course succeeds the Course in Biology. It takes up the study and dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. Vertebrate Zoölogy. Recitations and dissections. This is a continuation of Course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. Philosophy of Zoölogy. Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. Entomology. Recitations and laboratory work. In this Course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. Heredity. Minor Course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. Phænogamic Botany. Recitations, lectures, and field work. This is a general Course including the anatomy of the representa-

tive types and their relation to the environment; a study is made of the local flora.

17. **Cryptogamic Botany.** Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. **Elements of Forestry.** A Course covering the factors that control and regulate the development of our forests.

19. **Bacteriology.** Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

20. **Mineralogy and Geology.** Recitations, lectures, and laboratory work. A general Course intended to give the leading facts and principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

21. **Economic Geology.** Recitations, lectures, and laboratory work.

22. **German Biological Literature.** Junior year, one hour throughout the year.

MEDICAL PREPARATORY DEPARTMENT.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on work in the Organic Sciences. A large room has been

fitted up especially for Microscopic work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of reference, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeletons, a life-size French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

GEORGE FRANCIS REITER, ASSISTANT.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia Medica. Parts of these collections are kept in the laboratories and used in class-room work.

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystalized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian relics. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that

within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library ninety feet long has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A Course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

PAUL RAYMOND WENDT AND OLIVE MANSFIELD COOPER, ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in class-room work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

The Carnegie building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University under seal that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average stand-

ing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below 8.5; or if in his Senior year it is below 9. The passing grade for graduate students is 9. No one will be recommended for graduation in the Courses in Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon the studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire Course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire course are graduated *summa cum laude*; students who attain an average of 9.2 or more are graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall, which all the students of the College are required to attend.

Attendance upon public worship in some church in town on

Sunday morning is required. Students are required to attend the religious services held on Thanksgiving Day.

On the Day of Prayer for Colleges, a sermon is preached by the President, or by some one at his request. All the students are required to attend.

GOVERNMENT.

It is assumed that all who enter the Courses of study in the College do so for the purpose of acquiring an education, not only of the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The College does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in his office College women who may desire advice or assistance from him.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting,

missionary and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

Euepia; Theta Alpha. These are the two Literary Societies of the College for men. They hold meetings for Orations, Essays, and Debates. Each Society has a convenient hall, and by an arrangement of the Faculty will always have a nearly equal number of members.

The Zeta Literary Society is composed of young women admitted to any of the Courses in the College.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknell Mirror*. This periodical appears monthly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

Another association of students publishes, weekly, during the school year, the *Orange and Blue*.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or class-room work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. Young women have opportunity for physical training in the Calisthenium of the Women's College. These are now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics, and who shall have received his preparatory training at Bucknell Academy.

The prize for 1912 was awarded to Gardner Wade Earle.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1912 was awarded to Edward Oliver Clark.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1912 was awarded to Edward John Richards.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation, open for competition to the Sophomore and Freshman Classes, were awarded in 1912, Sophomore equally, to Mary Ellen Race and Edna Alice Whittam; Freshman to Florence B. Barber.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1912 to Richard Hamsher Bowling, Jr.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1912 to Boyd Henry Walter and Charles Adam Fryling.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their Course in College shall have been without exception."

The first prize was awarded in 1912 to James Pardon Harris, and the second to Coleman John Harris.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A.M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their Course in College shall have been without exception."

The prize for excellence in Greek was awarded in 1912 to Frederick Iglar; the prize for excellence in Latin was awarded in 1912 to James Pardon Harris.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A.M., Chaplain in the United States Navy, and a graduate from the Theological Department of

this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1912 to Harry Scheidy Everett.

THE ANNA MOORE HARE PRIZE.

In memory of his daughter, Anna Moore Hare, the Reverend Calvin Aurand Hare, A.M., has established an annual prize in Logic, to be awarded to that student at graduation who shall have done the best work in Logic, regard being had both to the amount and the quality of the work.

The prize was awarded in 1912 to Lewis Perrine Robinson.

SCHOLARSHIPS.

I. THE BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A.M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A.B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIP.

The William V. Wilson Scholarship was established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnæ Club, is available for a woman student from Philadelphia.

X. THE MEDICO-CHIRURGICAL SCHOLARSHIP.

The Medico-Chirurgical Medical College of Philadelphia offers a scholarship covering tuition in that college to the student from Bucknell University who evinces the best preparation and aptitude for medical work.

XI. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy members of the graduating class.

XII. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

EXTRA STUDIES.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take special work in any department of the College under the direction of the Professor of that department.

2. Such work must be assigned by the Professor, and the method of study described by him.

3. If the student shall attain an aggregate average of 9 in all the studies of the current term, and pass a satisfactory examination in the voluntary study, the work shall be credited to him.

4. Only one such study may be pursued by any one student during any one term. A student may also take two such minor studies or one such major study in the Summer vacation.

5. The Professor with whom the student is working shall have the privilege of requiring a partial examination on the work done at any time during the term, and there may be regular recitations at the Professor's option.

6. The amount and quality of minor work shall be taken into account in awarding honors at graduation, but is not counted toward any degree.

EXPENSES.

The College charges amount to \$150 per annum, for those who room in the College buildings, and \$140 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as tuition. Tuition is rated at \$50 per annum, and is included in the College charges. Students in the Course in Civil, Electrical or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged the same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$10 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damage to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board in the Academy.

Young women in the Collegiate Department room and board in the Women's College. The standard annual charge for board, tuition, furnished room, heating, lighting, is \$325. An extra charge for choice rooms in the Bucknell Cottage and in New Cottage, ranging from \$5 to \$10 per term, is made.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$5 per term is charged for gas, water, and general chemicals for each course, except Courses 1 and 2, for which the charge is \$2.50. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men Students can board in clubs at a cost of from \$2.50 to \$3.00 per week. Boarding can be obtained in private families at \$4.00 or \$5.00 per week, or at the table of the Bucknell Academy at \$4.00 per week. No self-boarding is allowed in the College buildings.

SIXTY-SECOND ANNUAL COMMENCEMENT.

WEDNESDAY, JUNE 19, 1912.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

STANLEY POWELL DAVIES,
JAMES PARDON HARRIS,
LEONE ALMARE HAVICE,

WILLIAM HENRY MILLER,
ROBERT ROWE SELLERS,
SUZANNE EMMA WEDDELL.

ORATIONS MAGNA CUM LAUDE.

CHARLES ANTHONY,
HARRY STEVENS BASTIAN,
ALBERTA LILLIAN BRONSON,
CECIL RUSSELL CHILDS,
WILLIAM WEBSTER EISTER,
HARRY SCHEIDY EVERETT,
VERA MILDRED FROST,
COLEMAN JOHN HARRIS,
RUSSELL CONWELL HOFFMAN,
DALE DAVIS HOLLENBAUGH,
FREDERICK BENTLEY IGLER,

HOWARD JOHNSON,
DAVID A. McNEAL,
GEORGE FRANCIS REITER,
EVA MAY RITTENHOUSE,
LEWIS PERRINE ROBINSON,
FREDERICK VALENTINE ROCKEY,
HELEN LAURA RUTH,
PAUEL DANIEL SCHREIBER,
WILLIAM GLENN TEGTMEIER,
DANIEL MAYNARD WISE,
OSCAR WOLF.

ORATIONS CUM LAUDE.

CLARENCE BLAKE BREWER,
FLORENCE MAY CLUM,
JAMES DANIEL COLLISON,
ALEXANDER CLEVELAND CONNER,
ELWOOD HARRIS COURTER,
EDWARD PATCHIN DUFTON,
WALTER SAMUEL EISENMENGER,
WILLIAM ALFRED GOEHRING,
FRANK RAHN HEAN,
EVA HIMMELREICH,
FREDERICK LANGE, JR.,

WILLIAM ANDERSON LESHER,
HELEN STRAIT LEVEGOOD,
OLIVE MARIE LONG,
MERTON MILES OGDEN,
EDWARD ROY PARKE,
JOHN HENRY RUFUS ROBERTS,
SUSAN CAROLINE SNYDER,
ROBERT AUGUSTUS STOUGHTON,
JESSE ROY TYSON,
ARTHUR DAVID WALTZ,
VIOLET ELEANOR LOUISE WETTERAU.

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 19, 1912.

A. DEGREES IN ARTS.

I. MASTER OF ARTS.

GEORGE FOSTER BAILETS,	JOHN HENRY MATHIAS,
PETER GARFIELD COBER,	CHARLES STILLWELL ROUSH,
NEWTON CROMWELL FETTER, JR.,	ELIZABETH STEPHENSON,
FRANK THOMAS HAMILL,	PAUL GEORGE STOLZ,
JAMES PARDON HARRIS,	FRANK LANDIS YOST,
MORRIS VICTOR HUYETTE,	JOHN ADAM YOUNG,
HEBER WILKINSON YOUNGKEN.	

II. BACHELOR OF ARTS.

MINNIE M. ANDREWS,	RUSSELL CONWELL HOFFMAN,
EARL RUDOLPH BARTHOLOMEW,	FREDERICK BENTLEY IGLER,
(Jurisprudence),	HOWARD JOHNSON,
NELLIE R. BERIE,	EMMA ELIZABETH KEISER,
ALBERTA LILLIAN BRONSON,	OLIVE MARIE LONG,
ADA ETHEL BROOKS,	DAVID A. MCNEAL,
CECIL RUSSELL CHILDS,	(Jurisprudence),
FLORENCE MAY CLUM,	EVA MAY RITTENHOUSE,
LLOYD LANGDON COIL,	LEWIS PERRINE ROBINSON,
JAMES DANIEL COLLISON,	(Jurisprudence),
ALEXANDER CLEVELAND CONNER,	FREDERICK VALENTINE ROCKEY,
(Jurisprudence),	(Jurisprudence),
STANLEY POWELL DAVIES,	DAVIS CLIFFORD RUTH,
HARRY SCHEIDY EVERETT,	HELEN LAURA RUTH,
JAY HUDSON FLECKENSTINE,	ALICE PERRAULT SCOTT,
VERA MILDRED FROST,	SUSAN CAROLINE SNYDER,
COLEMAN JOHN HARRIS,	WILLIAM GLENN TEGTMEIER,
JAMES PARDON HARRIS,	(Jurisprudence),
FRANK RAHN HEAN,	VIOLET ELEANOR LOUISE WETTERAU.
(Jurisprudence),	

III. BACHELOR OF PHILOSOPHY.

MAZE RITTER CALLAHAN,	JOHN WILLIAM GRANDFIELD,
RALPH FLETCHER DAVENPORT,	LEONE ALMARE HAVICE,

ROBERT WILLIAM MEYER,
WILLIAM HENRY MILLER,
PEARL IRENE REAM,

GEORGE FRANCIS REITER,
DAVID YEAKEL SIESHOLTZ,
JOHN SHERMAN WELCHONS.

IV. BACHELOR OF LITERATURE.

CARA REESE.

B. DEGREES IN SCIENCE.

I. THE SECOND DEGREE IN GENERAL SCIENCE.

HARRY FRANCIS BAILEY,	DAVID JACKSON HAWK,
DAVID ALBERT GREEN,	PAUL CLINTON SNYDER,
SPENSER TILLINGHAST HARRIS,	IRVIN WELLINGTON ZEIGLER.

II. THE FIRST DEGREE IN GENERAL SCIENCE.

WILLIAM WEBSTER EISTER,	HELEN STRAIT LEVEGOOD,
HARRY BENNETT ENGLISH,	HAROLD WILLIAM MUSSER,
WILLIAM ALFRED GOEHRING, JR.,	PAUL DANIEL SCHREIBER,
EVA HIMMELREICH,	RUBY VANNINKA STUCK,
DALE DAVIS HOLLENBAUGH,	LOUIS ADAM WALDNER,
PERCY POWERS KINNAMAN,	SUZANNE EMMA WEDDELL.

III. THE FIRST DEGREE IN BIOLOGICAL SCIENCE.

ELWOOD HARRIS COURTER,	JOHN HENRY RUFUS ROBERTS,
HOWARD LESTER FARQUHAR,	LAWRENCE EMERSON SPROUT,
ARTHUR DAVID WALTZ.	

IV. THE FIRST DEGREE IN CHEMICAL SCIENCE.

OLIVER SAMUEL DELANCEY,	WALTER SAMUEL EISENMINGER.
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V. THE FIRST DEGREE IN CIVIL ENGINEERING.

CLARENCE BLAKE BREWER,	MERTON MILES OGDEN,
EDWARD PATCHIN DUFTON,	EDWARD ROY PARKE,
FREDERICK LANGE, JR.,	ROBERT ROWE SELLERS,
WILLIAM ANDERSON LESHER,	ROBERT AUGUSTUS STOUGHTON,
LYMAN LLEWELLYN LISTER,	JESSE ROY TYSON,
CHARLES ANTHONY OSCAR WOLF.	

VI. THE FIRST DEGREE IN ELECTRICAL ENGINEERING.

HARRY STEPHEN BASTIAN,	HARRISON SCHUYLER SWEET,
DANIEL MAYNARD WISE.	

COMMENCEMENT ADDRESSES

Baccalaureate Sermon.....	THE PRESIDENT
Sermon, Education Society.....	ALBERT E. WAFFLE, D.D.
Address before the Alumni Association..	THOMAS M. EASTWOOD, D.D.
Poem before the Alumni Association.....	GEORGE WHITMAN, D.D.
Annual Address.....	THOMAS O. CONANT, LL.D.
Commencement Address.....	THE PRESIDENT

TEACHERS' CERTIFICATES.

Teachers' Provisional Certificates of Pennsylvania are issued to graduates of Bucknell University good for three years; Permanent Certificates are issued upon three years' successful experience in teaching in the schools of the state. Teachers' Certificates are also issued to graduates of Bucknell University by the Department of Education, State of New York, State of New Jersey, and all other states which issue certificates to the graduates of any colleges.

ALUMNI ASSOCIATIONS.

The General Alumni Association.

President, ELTON S. CORSON, M.D., Bridgeton, N. J.

Secretary, PROF. GUIDO CARL LEO RIEMER, PH.D., Lewisburg.

The Alumni Club of Philadelphia.

President, W. NORMAN MORRIS, ESQ., Philadelphia.

Secretary, CLEMENT K. ROBB, Philadelphia.

The Alumni Club of New York City.

President, T. A. K. GESSLER, D.D., New York City.

Secretary, ANDREW GREGG LOOMIS, A.B., LL.B., New York City.

The Alumni Club of Pittsburgh.

President, HARRY B. WASSELL, A.B., Pittsburgh.

Secretary, ELKANAH B. HULLEY, SC.B., Pittsburgh.

The Alumni Club of Chicago.

President, A. R. E. WYANT, PH.D., Chicago.

Secretary, JOSEPH C. HAZEN, PH.B., Chicago.

The Alumni Club of Northeastern Pennsylvania.

President, WILLARD MAINE BUNNELL, A.B., ESQ., Scranton.

Secretary, JOHN S. WHIGHTNOUR, D.D., Scranton.

The Alumni Club of Harrisburg.

President, JOHN C. NISSLEY, A.M., ESQ., Harrisburg.

Secretary, HARVEY F. SMITH, M.D., Harrisburg.

The Alumni Club of Washington City.

President, HENRY H. BLISS, A.M., ESQ., Washington, D. C.

Secretary, JOHN C. HOSTETTER, SC.M., Washington, D. C.

The Alumni Club of Central Pennsylvania.

President, JUDGE T. J. BALDRIDGE, Hollidaysburg.

Secretary, S. F. FORGEUS, D.D., Huntingdon.

The Alumni Club of Williamsport.

President, PROF. PERCY M. BULLARD, A.B., Williamsport.

Secretary, HARRY CHESTER FITHIAN, A.M., ESQ., Williamsport.

The Alumni Club of Lewisburg.

President, LEROY T. BUTLER, A.B., Lewisburg.

Secretary, LEO L. ROCKWELL, A.M., Lewisburg

The Alumni Club of Sunbury.

President, GEORGE EDWARD DEPPEN, A.B., ESQ.

Secretary, CULLEN FRAZER SHIPMAN, A.B., ESQ.

NAMES OF STUDENTS.

GRADUATE STUDENTS.

NAME.	MAJOR SUBJECT.	RESIDENCE.
PAUL JAMES ABRAHAM, SC.B., <i>Jurisprudence.</i>		Wilkinsburg
MARC LUTHER BALDWIN, A.B., <i>Latin.</i>		Mercersburg
JOHN CHARLES BANK, E.E., <i>Engineering.</i>		Newark, N. J.
IRVIN ALBERT BARTHOLOMEW, SC.B., <i>Engineering.</i>		Nyssa, Oregon
CONRAD LESLIE BASKINS, A.B., <i>Jurisprudence.</i>		Lincoln, Neb.
ELBINA LAVINIA BENDER, A.B., <i>Literature.</i>		Lewisburg
MARSHALL LEON BENN, SC.B., <i>Science.</i>		Coudersport
MINNIE ELIZABETH BROBST, A.B., <i>Latin.</i>		Scottdale
JOHN WARD BROWN, A.B., <i>Philosophy.</i>		Kingwood, W. Va.
KATHARINE DILL BROWN, SC.B., <i>Mathematics.</i>		Philadelphia
BURLEIGH CLAYPOOLE, PH.B., <i>Pedagogy.</i>		Douglas, Wyo.
ANSLEY BAILEY CLAYPOOLE, A.B., <i>Philosophy.</i>		New Castle, Del.
WALTER MADISON CORLL, A.B., <i>Literature.</i>		Pittsburgh
CLYDE WILLIAM CRANMER, PH.B., <i>Biology.</i>		Williamsport
HARRY SCHEIDY EVERETT, A.B., <i>Engineering.</i>		Lewisburg
RALPH FREDERICK DAVENPORT, PH.B., <i>Science.</i>		Carlisle

NAME.	MAJOR SUBJECT.	RESIDENCE.
FRANK HERMAN FRITZ, A.B.,	<i>History.</i>	Wilkes-Barre
WILLIAM HAYES GATEHOUSE, A.B.,	<i>History.</i>	Kitzmiller, Md.
FRANK KEMP GIBSON, A.B.,	<i>Philosophy.</i>	Wyoming, N. Y.
WILLIAM ALFRED GOEHRING, SC.B.,	<i>Science.</i>	Lewisburg
JOHN WESLEY HALLIWELL, A.B.,	<i>Language.</i>	Watertown, Conn.
CLARA ELEANOR HARMAN, A.B.,	<i>Literature.</i>	Montoursville
JOSEPH WELLS HENDERSON, A.B.,	<i>Jurisprudence.</i>	Montgomery
EARL EDWARD HINMAN, SC.B.,	<i>Science.</i>	Bellefonte
DANIEL EDGAR HOTTENSTEIN, PH.B., M.D.,	<i>Biology.</i>	Millersburg
ELMER AZIMA HUMMEL, A.B.,	<i>Science.</i>	Mifflintown
JOHN FARL HUMMER, SC.B.,	<i>Biology.</i>	Potsdam, N. Y.
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Waterloo, N. Y.
HENRY S. JONES, PH.B.,	<i>Pedagogy.</i>	Plymouth
LEON ELLISON JONES, E.E.,	<i>Engineering.</i>	Scotia, N. Y.
EMMA ELIZABETH KEISER, A.B.,	<i>Pedagogy.</i>	Mt. Carmel
RAYMOND MINER KENDALL, PH.B.,	<i>Science.</i>	Cleveland, Ohio
ONESIMUS GEORGE LANGFORD, A.B.,	<i>History.</i>	Oaklyn, N. J.
HERBERT SPENCER LLOYD, PH.B.,	<i>History.</i>	Kingston
ROY ALLEN LONG, PH.B.,	<i>Jurisprudence.</i>	Philadelphia
JAMES LOSE, SC.B.,	<i>Engineering.</i>	Williamsport
ROBERT BRUCE MACKEY, PH.B., M.D.,	<i>Organic Science.</i>	Waverly

NAME.	MAJOR SUBJECT.	RESIDENCE.
JOSEPH CIPRIANO MACRO, A.B.,	<i>Jurisprudence.</i>	New York City
CHARLES RICHARD MALLERY, A.B.,	<i>Jurisprudence.</i>	Altoona
CHARLES STEPHENS MARSH, SC.B.,	<i>Pedagogy.</i>	Saltsburg
WILLIAM McCULLEN, C.E.,	<i>Engineering.</i>	Philadelphia
SALLIE SIDES MCSPARREN, A.B.,	<i>Literature.</i>	Philadelphia
SARA ELLA MEYER, PH.B.,	<i>History.</i>	Lewistown
JENNIE FREDA MOHRING, A.B.,	<i>Philosophy.</i>	Johnsonburg
MARY MONTFORT MOLL, A.B.,	<i>English.</i>	Mahanoy City
ROBERT BRUCE MORRIS, PH.B.,	<i>Philosophy.</i>	Philadelphia
ANNA ELIZABETH NOAKER, SC.B.,	<i>Mathematics.</i>	Spring Valley, Ill.
HELENA MAE OLDS, PH.B.,	<i>German.</i>	Manasquan, N. J.
FRANK HALFPENNY PAINTER, PH.B.,	<i>History.</i>	Jersey Shore
WILLIAM WALLACE PORTSER, C.E.,	<i>Engineering.</i>	Clayton, Del.
WILLIAM WESLEY RAKER, SC.B.,	<i>Economics.</i>	Muncy
GEORGE FRANCIS REITER, PH.B.,	<i>Biology.</i>	Muncy
STANLEY HERBERT ROLFE, A.B.,	<i>History.</i>	Nanticoke
GEORGE BARTLEY SCHROYER, C.E.,	<i>Engineering.</i>	Lancaster
JACOB HARRY SCHUCH, C.E.,	<i>Engineering.</i>	Anaconda, Mont.
HELEN ANNE CLARE SCOTT, SC.B.,	<i>English.</i>	Scranton
CLARA SENORA SHELLHAMMER, SC.B.,	<i>Science.</i>	Ann Arbor, Mich.
JAMES WESLEY SHIPE, A.B.,	<i>Economics.</i>	Bristol

NAME.	MAJOR SUBJECT.	RESIDENCE.
JAMES HENRY SHOEMAKER, SC.B.,	<i>Literature.</i>	Slippery Rock
FRANCES REBECCA SHOVE, A.B.,	<i>Latin.</i>	Wellsboro
REUBEN WELTY SHRUM, SC.B.,	<i>English.</i>	Saltsburg
STANTON REINHART SMITH, SC.B.,	<i>Biology.</i>	Philadelphia
WALLACE JAMES SNYDER, SC.B.,	<i>Chemistry.</i>	Edinboro
ROBERT MCCURDY STEELE, PH.B.,	<i>Language.</i>	Clarion
ALBERT KNORR STOCKEBRAND, A.B.,	<i>Philosophy.</i>	Chester
MARTHA JANE THOMAS, PH.B.,	<i>German.</i>	Frostburg, Md.
LOUIS JAMES VELTE, A.B.,	<i>Philosophy.</i>	Camden, N. J.
KATHALYN VONHOUTON VOORHIS, SC.B.,	<i>Science.</i>	Ann Arbor, Mich.
CHARLES CARROLL WAGNER, SC.B.,	<i>Chemistry.</i>	Madison, S. D.
AMELIA MARGARET WENSEL, A.B.,	<i>German.</i>	Brockport, N. Y.
MAX CONRAD WIAANT, A.B.,	<i>History.</i>	Rochester, N. Y.
SAMUEL G. WILLIAMS, SC.B.,	<i>Economics.</i>	Shamokin
VIOLETTA WOLFE, PH.B.,	<i>Language.</i>	Lakota, N. D.

Graduate Students, 73.

SENIOR CLASS.

CLASS OF 1913.

NAME.	RESIDENCE.	ROOM.
JOLETTA MAY ARTHUR,	<i>Winnipeg, Canada.</i>	Women's College
HELEN KING BARTOL,	<i>Lewisburg.</i>	University Avenue
BRIGHT WILKES BECK,	<i>Cressona.</i>	No. 38, East College
CHARLES BAKER BERNHART,	<i>Lewisburg.</i>	North Second Street
HENRY HARMON BLISS, JR.,	<i>Washington, D. C.</i>	No. 90, West College
JOHN RALPH BOGERT,	<i>Norristown.</i>	No. 60, West College
RICHARD HANSBER BOWLING, JR.,	<i>Norfolk, Va.</i>	No. 22, West Wing
JOHN WESLEY BRESSLER,	<i>Slatington.</i>	No. 104, East College
MARY MARGARET BROWN,	<i>Braddock.</i>	Women's College
EDWIN CHARLES BRUSH,	<i>Jackson.</i>	No. 46, West College
HUGH MAX BULLARD,	<i>Newberry.</i>	No. 64, West College
PERRY AQUILA CARIS,	<i>Tylersville.</i>	No. 9, East Wing
HELEN WATSON DAVIS,	<i>Shiloh, N. J.</i>	Women's College
MILES ELTON DEAN,	<i>Altoona.</i>	No. 110, East College
DAVID FORREST DUNKLE,	<i>Lewisburg.</i>	South Fifth Street
WALTER HERBERT EDWARDS,	<i>Wilmington, Del.</i>	No. 49, East College
FAYETTE CLINTON ESHELMAN,	<i>Franklin.</i>	St. George Street
MINNIE IOLA ETZWEILER,	<i>Lewistown.</i>	Women's College
ELMER ELLSWORTH FAIRCHILD,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
JOHN DIETREICH WITTICH	FETTER, <i>Barnesboro.</i>	No. 118, East College
MARIAN FISCHLER,	<i>Wellsboro.</i>	Women's College
HOWARD VOELKER FISHER,	<i>Tamaqua.</i>	St. George Street
CHARLES ADAM FRYLING,	<i>Sunbury.</i>	No. 17, West Wing
HAZEL ETTA GALLOWAY,	<i>Lewisburg.</i>	North Fifth Street
MARWOOD BENJAMIN GLOVER,	<i>Collingdale.</i>	No. 12, East College
HOWARD MARSHALL GOEHRING,	<i>Zelienople.</i>	No. 90, West College
FRANKLIN OSCAR GORSUCH,	<i>Finksburg, Md.</i>	No. 9, East College
JAMES BOWEN GRIFFITH,	<i>Waverly, Iowa.</i>	No. 109, East College
MAX GROSSMAN,	<i>Mt. Carmel.</i>	No. 37, West College
GEORGE FREEMAN HAINES,	<i>Winfield.</i>	Winfield
CAREY WATROUS HARDING,	<i>Athens.</i>	No. 16, East Wing
BENJAMIN SOLOMON HARRIS,	<i>Lewisburg.</i>	Market Street
ORWILL VAN WICKLE HAWKINS,	<i>Freneau, N. J.</i>	St. George Street
CARLTON BALLARD HOOKER,	<i>Troy.</i>	No. 87, West College
ETHEL MARGARET HOTTENSTEIN,	<i>Milton.</i>	Milton
WILLIAM CURRIE HULLEY, JR.,	<i>Pittsburgh.</i>	No. 68, East College
MARY JANE IREY,	<i>Danville.</i>	South Fourth Street
LOGAN EARL JACKSON,	<i>Williamsport.</i>	No. 16, West Wing
ALBERT AUGUST JORDAN,	<i>Philadelphia.</i>	No. 41, East College
ALEXIS WOOLMAN KEEN,	<i>Salem, N. J.</i>	No. 28, West Wing

NAME.	RESIDENCE.	ROOM.
HARRY XING KELLY,	<i>Brookville.</i>	No. 48, East College
MINNIE ETHEL MAYNARD,	<i>Williamsport.</i>	Women's College
JOSEPH LESLIE MCKEAGUE,	<i>Millville, N. J.</i>	No. 32, East College
GEORGE MIDDLETON,	<i>Edwardsville.</i>	No. 25, East Wing
MARY FLORENCE MITCHELL,	<i>Penn's Grove, N. J.</i>	Women's College
CHARLES AUGUSTUS NYBERG,	<i>Amityville, L. I., N. Y.</i>	No. 107, East College
CLAYTON ELMER PHILLIPS,	<i>Cressona.</i>	No. 88, East College
GEORGE THURMAN PIERSOL,	<i>Honey Brook.</i>	No. 61, West College
MARY DELINDA POTTER,	<i>Center Hall.</i>	Women's College
GEORGE WILLIAM POTTS,	<i>Greensburg.</i>	St. George Street
HARTLEY CARR POWELL,	<i>Salem, N. J.</i>	No. 42, East College
ALBERT NORMAN REDELIN,	<i>Freeland.</i>	St. George Street
EARL MORGAN RICHARDS,	<i>Reading.</i>	No. 49, East College
LEONARD ANTHONY RICHARDSON,	<i>Elizabeth, W. Va.</i>	No. 8, West Wing
ROBERT LEVI ROOKE,	<i>Winfield.</i>	No. 101, East College
CHARLES LOY SANDERS,	<i>Mifflinburg.</i>	No. 22, East Wing
CLAY SHOEMAKER SANDERS,	<i>Mifflinburg.</i>	No. 22, East Wing
HAROLD AUGUSTUS SHAFFER,	<i>Lewisburg.</i>	South Second Street
JOSEPH PARDOE SHEARER,	<i>Milton.</i>	Milton
EDWARD WETHERELL SMITH,	<i>Salem, N. J.</i>	No. 108, East College
HENRY GRIGGS WESTON SMITH,	<i>Malvern.</i>	No. 16, East Wing

NAME.	RESIDENCE.	ROOM.
HENRY SMITH STEELE,	<i>New Alexandria.</i>	No. 102, East College
AMOS MILES STETLER,	<i>Middleburg.</i>	No. 112, East College
RALPH AMOS STILL,	<i>Danville.</i>	St. George Street
LESLIE WELLINGTON STOUT,	<i>Audubon, N. J.</i>	No. 2, East College
RALPH LEE TALBOT,	<i>Martin's Ferry, Ohio.</i>	St. George Street
SAMUEL PAUL TEAMER,	<i>Malvern.</i>	St. George Street
BOYD HENRY WALTER,	<i>Kittanning.</i>	Academy
PAUL RAYMOND WENDT,	<i>Williamsport.</i>	No. 100, East College
SAMUEL KNOX WHITE,	<i>Fairfield.</i>	No. 95, West College
ALBERT BACON WINTER,	<i>Zelienople.</i>	No. 92, West College
HERMAN EMERSON ZEHNER,	<i>Tamaqua.</i>	St. George Street

Seniors, 72.

THE JUNIOR CLASS.

CLASS OF 1914.

NAME.	RESIDENCE.	ROOM.
DALE REESE ANGSTADT,	<i>Lewisburg.</i>	Lewisburg
RAYMOND LANCE APGAR,	<i>Trenton, N. J.</i>	No. 30, East College
CHARLES JACOB APPLGATE,	<i>Catasauqua.</i>	No. 17, East Wing
EARLE BUDD ARMSTRONG,	<i>Paulsboro, N. J.</i>	No. 17, East Wing
NEVIN GEORGE BACHMAN,	<i>Kempton.</i>	No. 93, East College
H. WALTER BAKER,	<i>Lancaster.</i>	No. 57, East College
RALPH EMERSON BELL,	<i>Munhall.</i>	No. 53, West College
DANIEL FLOYD K. BERTOLETTE,	<i>Manatawney.</i>	No. 15, West Wing
CHENEY KIMBER BOYER,	<i>Homestead.</i>	No. 70, West College
LOUIS HENRY BOYER,	<i>Cressona.</i>	No. 40, East College
LOIS MAY BROWN,	<i>Lewisburg.</i>	Lewisburg
HARRY EARLE CAMPBELL,	<i>Shunk.</i>	No. 72, West College
CLARENCE BARNABAS CARVER,	<i>Carmel, N. Y.</i>	No. 79, East College
FRIEDMAN HOLMES CATHRALL,	<i>West Pittston.</i>	No. 33, East College
CHARLES ELLSWORTH COLEMAN,	<i>Boonton, N. J.</i>	No. 60, East College
JAMES RUSSELL COOK,	<i>Trenton, N. J.</i>	No. 35, East College
OLIVE MANSFIELD COOPER,	<i>Cortland, N. Y.</i>	Women's College
DAYTON THOMAS CORSON,	<i>Paulsboro, N. J.</i>	No. 17, East Wing
SAMUEL HENRY COULTER,	<i>Lamney, Ireland.</i>	No. 94, East College

NAME.	RESIDENCE.	ROOM.
ROBERT JOHN CRANE,	<i>Katonah, N. Y.</i>	No. 80, East College
JOHN RUSSELL CRISWELL,	<i>Sharpsburg.</i>	No. 40, West College
RACHEL MIRIAM DAVIS,	<i>Woodstown, N. J.</i>	Women's College
HARRY DEWIRE,	<i>Winfield.</i>	Winfield
HAROLD MACILVAINE DORRELL,	<i>Alloway, N. J.</i>	No. 77, East College
CHARLES BRYANT DRAKE,	<i>Old Forge.</i>	No. 74, East College
RUTH HORTENSE EDWARDS,	<i>Williamsport.</i>	Women's College
HELEN HORTENSE EEDE,	<i>Ballston Spa, N. Y.</i>	Women's College
RALPH WILLIAM EVERALL,	<i>Sharon.</i>	St. George Street
WILLIAM HENRY EYSTER,	<i>Fisher's Ferry.</i>	No. 83, West College
WALTER DAYTON FARLEY,	<i>Lewisburg.</i>	South Fourth Street
DAVID GERALD FITZGERALD,	<i>Mt. Pleasant.</i>	No. 3, East Wing
ELLEN WOLFE FOCHT,	<i>Lewisburg.</i>	South Second Street
JASPER C. FRANTZ,	<i>Friendsville, Md.</i>	No. 1, East Wing
GUY LESTER FULLMER,	<i>Montoursville.</i>	No. 10, East College
JOHN LUKE GEHMAN,	<i>Martindale.</i>	No. 24, East Wing
EARL BALLARD GLOVER,	<i>Erie.</i>	No. 91, West College
JOSHUA ROBERT GOLIGHTLY,	<i>Wilkes-Barre.</i>	No. 65, West College
ALBERT DONALD GRAY,	<i>Altoona.</i>	No. 85, West College
GEORGE THOMAS GROVE,	<i>Harrisburg.</i>	No. 78, East College
ROBERT CLARK HAGAN,	<i>Uniontown.</i>	No. 31, East College

NAME.	RESIDENCE.	ROOM.
FRANK RUSSELL HAMBLIN,	<i>Lewisburg.</i>	St. George Street
EUDORA REGINA HAMLER,	<i>Lewisburg.</i>	Market Street
MARIAN KATHRYN HARMAN,	<i>Montoursville.</i>	Women's College
WALTER WILLIAM HARRIS,	<i>Lewisburg.</i>	University Avenue
RUTH TUSTIN HEINSLING,	<i>Altoona.</i>	Women's College
JOSEPH MUR HILLMAN,	<i>Shamokin.</i>	No. 58, East College
MIRIAM RUTH HOFFA,	<i>Lewisburg.</i>	South Fifth Street
JAMES RALPH IRWIN,	<i>Schuyler.</i>	No. 14, East Wing
DOROTHEA MARGUERITE JONES,	<i>Minersville.</i>	Women's College
GEORGE THOMPSON KEECH, JR.,	<i>Netcong, N. J.</i>	No. 11, East Wing
MILDRED RUTH KIRK,	<i>Clearfield.</i>	South Front Street
WILMA HARRIETTE SPEERS KNAPP,	<i>Hawley.</i>	Women's College
MARY ANNA KUNKLE,	<i>Lewisburg.</i>	Lewisburg
RALPH WARREN KUNKLE,	<i>Lewisburg.</i>	Lewisburg
HENRY GEORGE KUYL,	<i>Paterson, N. J.</i>	No. 56, East College
LELAND PROBASCO LANING,	<i>Bridgeton, N. J.</i>	No. 34, East College
ERNEST OLOF LINDBERG,	<i>Sag Harbor, N. Y.</i>	No. 93, West College
CHARLES WALTER LOTTE,	<i>Paterson, N. J.</i>	No. 92, East College
WALLACE CLINE LOWTHER,	<i>Punxsutawney.</i>	No. 19, East College
LOUIS FREDERICK LYNE, JR.,	<i>Jersey City, N. J.</i>	Lewisburg
GEORGE HUMMEL MADTES,	<i>Punxsutawney.</i>	No. 25, East College

NAME.	RESIDENCE.	ROOM.
ARTHUR SAWYER MAHONEY,	<i>Passaic, N. J.</i>	Lewisburg
SAMUEL HARRISON MARKOWITZ,	<i>Wilmington, Del.</i>	No. 16, East Wing
ROBERT RAY MCCOMBS,	<i>McClellandtown.</i>	St. George Street
FRANCES TERRY McNALL,	<i>Muncy.</i>	Women's College
RALPH HERMAN MOORE,	<i>Slippery Rock.</i>	No. 24, East College
THOMAS EDWARD MOORE,	<i>Las Animas, Colo.</i>	Lewisburg
ANTHONY JAY MURRAY,	<i>Scranton.</i>	No. 40, West College
HOWARD BURTON MUSSER,	<i>South Williamsport.</i>	No. 53, East College
RAYMOND FORD NICHOLS,	<i>Tamaqua.</i>	No. 47, West College
HELEN GRIFFIN OTT,	<i>Bridgeton, N. J.</i>	Women's College
ROBERT JOHN PARMENTER,	<i>Elmira, N. Y.</i>	St. George Street
HAROLD EVANS POWELL,	<i>Scranton.</i>	No. 48, West College
WILLIAM DEAN READING,	<i>Franklin.</i>	St. George Street
FLORENCE ISABELLE REIMENSNYDER,	<i>Milton.</i>	Milton
WILLIAM STANLEY REITZ,	<i>Trevorton.</i>	St. George Street
JOHN WINTER RICE,	<i>Williamsport.</i>	No. 52, West College
EDWARD JOHN RICHARDS,	<i>Homestead.</i>	No. 9, East Wing
JESSE EARLE RILEY,	<i>Bridgeport, W. Va.</i>	No. 8, West Wing
KARL WHITMAN RIPPEL,	<i>Milton.</i>	Milton
GRACE ROSSITER,	<i>Sunbury.</i>	Women's College
CLIFFORD R. SCHENCK,	<i>Great Neck, L. I., N. Y.</i>	No. 33, West College

NAME.	RESIDENCE.	ROOM.
FRED OSCAR SCHNURE,	<i>Milton.</i>	No. 10, West Wing
JOHN GRANVILLE SCOUTON,	<i>Dushore.</i>	Lewisburg
LEVI HUBBARD SHATTUCK,	<i>Wellsboro.</i>	Market Street
MARIAN ESTHER SHIVERS,	<i>Haddonfield, N. J.</i>	Women's College
CLINTON FRANCIS SNYDER,	<i>Minersville.</i>	No. 86, East College
HARRY SYLVESTER STAHLER,	<i>Mauch Chunk.</i>	No. 15, West Wing
RAYMOND BEAUMONT STAPLETON,	<i>Mifflinburg.</i>	Mifflinburg
PAUL LOWRY STEIN,	<i>Lewisburg.</i>	Market Street
HELEN GLAZE STOUT,	<i>Milton.</i>	Milton
VICTOR FRANCIS SWENSON,	<i>Susquehanna.</i>	No. 43, West College
ALFRED SMITH VANOSTEN,	<i>Philadelphia.</i>	No. 115, East College
HELEN BOTTORF WAITE,	<i>Lock Haven.</i>	Women's College
HARRY BRUNGART WEAVER,	<i>Rebersburg.</i>	No. 72, East College
ALVIA MCGREGOR WELCHONS,	<i>Falls Creek.</i>	No. 10, East Wing
STEPHEN KUHN WELLS,	<i>Bloomsburg.</i>	No. 23, West College
NORMAN WILLMER WHITED,	<i>Hawthorne.</i>	No. 11, East Wing
EDNA ALICE WHITTAM,	<i>Chester.</i>	Women's College
SAMUEL LEIDY WILSON,	<i>Phillipsburg.</i>	No. 15, East Wing
JOHN FRANCIS WINKLEBLECH,	<i>Milton.</i>	Milton
FRANK BEACHAM WORRILOW,	<i>Chester.</i>	No. 20, East College
DORRANCE DANA ZINN,	<i>Philippi, W. Va.</i>	No. 89, East College
	<i>Juniors, 103.</i>	

THE SOPHOMORE CLASS.

CLASS OF 1915.

NAME.	RESIDENCE.	ROOM.
WILLIAM ARISTA AFFRON,	<i>Sag Harbor, N. Y.</i>	No. 94, West College
JOSEPH WILLIAM ALESHOUCKAS,	<i>Great Neck, N. Y.</i>	No. 21, West Wing
ESKEL VALENTINE ANDERSON,	<i>Monessen.</i>	No. 77, West College
MARION RUTH BANCROFT,	<i>Altoona.</i>	Women's College
FLORENCE BROWN BARBER,	<i>Lewisburg.</i>	South Second Street.
FRANCES FOSTER BARBER,	<i>Lewisburg.</i>	South Second Street
LESTER JUDSON BARTLETT,	<i>Lewisburg.</i>	St. George Street
JEREMIAH BUTLER BATES,	<i>Blossburg.</i>	No. 19, East Wing
MYRTLE PAULINE BAUMGARDNER,	<i>Sunbury.</i>	Sunbury
MELVILLE BEARDSLEY,	<i>Philadelphia.</i>	No. 100, East College
WARREN DALTON BELL,	<i>Williamsport.</i>	No. 35, West College
ISABELLE FRANCES BOND,	<i>Lewisburg.</i>	South Seventh Street
WILLIAM ELTON BOTT,	<i>Wilmington, Del.</i>	No. 20, East Wing
MABEL PAULINE BOYER,	<i>Mt. Pleasant.</i>	Women's College
GUY CLEVELAND BROSIUS,	<i>Rauchtown.</i>	No. 71, West College
CHARLES WARREN BROWN,	<i>Lewisburg.</i>	Lewisburg
FRANCIS THEODORE BROWN,	<i>Lewisburg.</i>	Lewisburg
MABEL MAY BROWN,	<i>Clearfield.</i>	Women's College
HENRY STUART BROWNELL,	<i>Williamsport.</i>	No. 88, West College

NAME.	RESIDENCE.	ROOM.
MALCOLM BUFFINGTON,	<i>Brookville.</i>	No. 11, East College
FRED MEINZER BURLEW,	<i>Freneau, N. J.</i>	No. 84, West College
WILLIAM ADAM CAWLEY,	<i>Milton.</i>	Milton
KEITH ERI CHAMBERS,	<i>Tidioute.</i>	No. 23, East Wing
EDGAR TILLMAN CLAPP,	<i>Milton.</i>	No. 10, West Wing
ALBERT JOHN CLARK,	<i>Bayonne, N. J.</i>	No. 23, East Wing
EDWARD OLIVER CLARK,	<i>Bayonne, N. J.</i>	No. 23, East Wing
EDWARD BELFOUR CLINE,	<i>Saltsburg.</i>	No. 14, East Wing
ROBERT MILLER COCHRANE,	<i>Greensburg.</i>	Lewisburg
ALBERT EDWARD COUGHANOUR,	<i>Uniontown.</i>	No. 37, East College
HOPE CRAIG,	<i>Brackenridge.</i>	Women's College
RAYMOND E. CROSS,	<i>Shohola.</i>	No. 42, West College
FRANK PETER CRUIKSHANK,	<i>Somerville, Mass.</i>	No. 24, West College
EMMA ELIZABETH DILLON,	<i>Trenton, N. J.</i>	Women's College
IRA SYLVESTER DUNKLE,	<i>Lewisburg.</i>	Lewisburg
SHERMAN DURSTINE,	<i>Mt. Pleasant.</i>	No. 28, East College
GARDNER WADE EARLE,	<i>Picture Rocks.</i>	No. 32, East Wing
HARVEY ELLSWORTH EAVENSON,	<i>West Chester.</i>	No. 15, East College
HAROLD CHARLES EDWARDS,	<i>Gouldsboro.</i>	No. 119, East College
MILTON CHARLES EMBREY,	<i>Mahanoy City.</i>	No. 26, East Wing
ARTHUR ELTON EVANS,	<i>Wilkes-Barre.</i>	No. 54, East College

NAME.	RESIDENCE.	ROOM.
MARY NASH EVANS,	<i>Yonkers, N. Y.</i>	Women's College
FREDERICK HARRISON FAHRINGER,	<i>Sunbury.</i>	No. 56, West College
LUELLA FRANK,	<i>Montandon.</i>	Montandon
JOSEPH FRANK GDANIEC,	<i>Mt. Carmel.</i>	No. 67, East College
CARL EDWARD GEIGER,	<i>Williamsport.</i>	No. 90, East College
FLORENCE GRACE GOOD,	<i>El Dorado.</i>	Women's College
WILLIAM THOMAS GOODWIN,	<i>Coatesville.</i>	No. 84, West College
MARGARET CHRISTINE GRETZINGER,	<i>Lewisburg.</i>	Lewisburg
CLAIR GEPHART GROOVER,	<i>Lewisburg.</i>	Lewisburg
CARRIE MARY JANE GRUGAN,	<i>West Milton.</i>	West Milton
ALBERT JOSEPH HAMLIN,	<i>Philadelphia.</i>	No. 120, East College
JOHN WILLIAM HEDGE,	<i>Scenery Hill.</i>	No. 87, East College
GEORGE PEUTELOW HERN,	<i>Passaic, N. J.</i>	No. 51, West College
ROLAND KEILHOLTZ HOKE,	<i>Emmitsburg, Md.</i>	No. 91, East College
ROBERT P. HOPKINS,	<i>Carbondale.</i>	No. 44, East College
HUGH CHARLES HOUSER,	<i>Wellsboro.</i>	North Third Street
GEORGE ALLISON IRLAND,	<i>Lewisburg.</i>	Market Street
WAYNE BENNETT JEFFERIS,	<i>Philadelphia.</i>	No. 113, East College
ROLAND MONROE JONES,	<i>Trevorton.</i>	No. 86, West College
PEARL I. KAWEL,	<i>Sunbury.</i>	Sunbury
WILLMON KEISER,	<i>Mt. Carmel.</i>	No. 65, East College

NAME.	RESIDENCE.	ROOM.
HAROLD RICHARD KELLY,	<i>Titusville.</i>	Lewisburg
BENJAMIN WINTERS LAIDLAW,	<i>Orange, N. J.</i>	No. 4, East College
RAMONA LENINGTON,	<i>Scranton.</i>	Women's College
RUTH MARGUERITE LENINGTON,	<i>Scranton.</i>	Women's College
PAUL BENTON LEWIS,	<i>Lewisburg.</i>	Lewisburg
LEDA ALICE MACFARLAND,	<i>Milton.</i>	Milton
JOSIAH J. MARKLE,	<i>Hanover.</i>	No. 61, East College
ESTHER MABEL MCCORMICK,	<i>Tyrone.</i>	Women's College
MARGARET MCCLURE,	<i>Lewisburg.</i>	Lewisburg
WALTER GALLOWAY MEEK,	<i>Allenwood.</i>	Allenwood
FRED FELTON MELLOTT,	<i>Everett.</i>	No. 29, West Wing
GILBERT JUDSON MEREDITH, JR.,	<i>Felton, Del.</i>	No. 32, East Wing
CARLTON ALFRED MICHAEL,	<i>Factoryville.</i>	No. 82, West College
EDNA AMELIA MILLER,	<i>Williamsport.</i>	Williamsport
WINIFRED WILBUR MILLER,	<i>Bridgeton, N. J.</i>	Women's College
NORMAN MITTERLING,	<i>Sunbury.</i>	Sunbury
WILLARD LESTER MOYER,	<i>Muncy.</i>	St. George Street
HAROLD STANLEY MYATT,	<i>Philadelphia.</i>	No. 28, West Wing
ROBERT ELSMERE OBERDORF,	<i>Sunbury.</i>	Sunbury
JESSIE MARGUERITE OSWALT,	<i>Altoona.</i>	Women's College
LUCILE ELIZABETH OWENS,	<i>Lewisburg.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
EDWARD WEDDELL PANGBURN,	<i>Elizabeth.</i>	No. 74, West College
WILLIAM LOUIS PARK,	<i>Montandon.</i>	Montandon
GRANVILLE PATTON PATTERSON,	<i>Ashland.</i>	Lewisburg
ETHEL ELIZABETH PETERSON,	<i>Penn's Grove, N. J.</i>	Women's College
ROBERT PREISKEL,	<i>Passaic, N. J.</i>	No. 51, West College
ELLIS LAWRENCE RAESLEY,	<i>Wilkes-Barre.</i>	No. 114, East College
HELEN BLAIR REED,	<i>Milton.</i>	Milton
JOHN BENJAMIN RISHIEL,	<i>Hughesville.</i>	No. 52, West College
EDGAR LLOYD ROGERS,	<i>Nittany.</i>	No. 12, East Wing
HAROLD ARTHUR RUNK,	<i>Harrisburg.</i>	No. 3, East College
WILLARD SAMUEL,	<i>Mt. Carmel.</i>	Lewisburg
DWITE HAYDEN SCHAFFNER,	<i>Falls Creek.</i>	No. 9, West Wing
WILLIAM HILLIARD SCHUYLER,	<i>Milton.</i>	Milton
CHARLES EDGAR SELLERS,	<i>Emmitsburg, Md.</i>	No. 29, East College
RUSSELL CONWELL SHIPMAN,	<i>Sunbury.</i>	Lewisburg
JAMES LEO SHOEMAKER,	<i>Norristown.</i>	No. 2, East Wing
MUNFORD SMITH,	<i>Munhall.</i>	No. 37, West College
OMAR HARRISON SMITH,	<i>Blairsville.</i>	No. 95, East College
JOHN HORATIO SPEER, JR.,	<i>West Chester.</i>	No. 65, West College
GEORGE SALVADORE STEVENSON,	<i>Vineland, N. J.</i>	No. 20, East Wing
MIRIAM JUSTINIA STRICKLER,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
MYRNA RUTH STRICKLER,	<i>Lewisburg.</i>	Lewisburg
CLAIR ESTERLINE STROHECKER,	<i>Lewisburg.</i>	Lewisburg
HENRY DAVID STUEMPFLE,	<i>Williamsport.</i>	No. 78, West College
DEAN DONNELL STURGIS,	<i>Uniontown.</i>	No. 43, East College
EARL SCHNEIDER TEED,	<i>Oregon Hill.</i>	No. 16, West Wing
JOHN DAVIS TREVASKIS,	<i>Weatherly.</i>	No. 51, East College
HOWARD ARTHUR VAN DINE,	<i>Great Neck, N. Y.</i>	No. 66, West College
HELEN DOWLING WAINWRIGHT,	<i>Columbus, N. J.</i>	Women's College
MARK MCNINCH WALTER,	<i>Mt. Carmel.</i>	Lewisburg
WALLACE JAMES WARD,	<i>Union City.</i>	No. 29, West Wing
WINIFRED WERKHEISER,	<i>West Milton.</i>	West Milton
FRANK FORREST WHITTAM,	<i>Chester.</i>	No. 18, East College
ANNA WILLIAMS,	<i>Nanticoke.</i>	Women's College
THOMAS BENNETT WILLIAMS,	<i>Saint Clair.</i>	St. George Street
WILLIAM THOMAS WINDSOR,	<i>Bradford.</i>	No. 34, West College
JOHN MOORE WINGERT,	<i>Lewisburg.</i>	Lewisburg
HIRAM MICHAEL WOLFE,	<i>Lewisburg.</i>	Lewisburg

Sophomores, 120.

THE FRESHMAN CLASS.

CLASS OF 1916.

NAME.	RESIDENCE.	ROOM.
SAMUEL GUY ALTER,	<i>Parnassus.</i>	No. 97, East College
HAROLD H. BAER,	<i>Uniontown.</i>	No. 25, East College
DERB WILLIS BARTHOLEMEW,	<i>Lewisburg.</i>	Market Street
LUDWIG DANIEL BECKER,	<i>Mt. Carmel.</i>	No. 63, East College
RAY PAUL BIGLER,	<i>Bentleyville.</i>	No. 84, East College
MAME BROWN,	<i>Ralston.</i>	Women's College
SAMUEL MILTON BRYANT,	<i>Lewistown.</i>	No. 31, East Wing
DOROTHY ELIZABETH BUNNELL,	<i>Union, N. J.</i>	Women's College
BRUCE EDWARD BUTT,	<i>New Midway, Md.</i>	No. 81, East College
EDGAR CARLTON CAMPBELL,	<i>Shunk.</i>	No. 75, West College
LESLIE HARLAND CAMPBELL,	<i>Shunk.</i>	No. 73, West College
HARRIET MARTIN CARPENTER,	<i>Woodbury, N. J.</i>	Women's College
RUSSELL SAVIDGE CONRAD,	<i>Sunbury.</i>	Sunbury
MAURICE BACON COOK,	<i>Greenwich, N. J.</i>	No. 12, West Wing
JAMES ALFRED CORRIN,	<i>Franklin.</i>	No. 36, West College
WILLIAM ELSTON COWIN,	<i>Franklin.</i>	No. 99, East College
WALTER SUPLEE CROUSE,	<i>Honey Brook.</i>	No. 68, West College
MAURICE HOWARD CRYDER,	<i>Tyrone.</i>	No. 22, East College
SAMUEL MARSHALL DAVENPORT,	<i>Plymouth.</i>	No. 25, East Wing

NAME.	RESIDENCE.	ROOM.
ROSCOE GRANGER DAVIS,	<i>West Chester.</i>	No. 54, West College
JOHN JONATHAN DE HAVEN,	<i>Duncannon.</i>	No. 30, East Wing
RUTH EMLYN EMBREY,	<i>Mahanoy City.</i>	South Fourth Street
MARGARET WASHINGTON EVANS,	<i>Plymouth.</i>	Women's College
RUSSELL WILLIAM EVERETT,	<i>Slatington.</i>	No. 103, East College
JAMES BURK FOLEY,	<i>Renovo.</i>	No. 38, West College
CYRUS BROWN FOLLMER,	<i>Milton.</i>	No. 69, West College
CARRIE DUNBAR FORESMAN,	<i>Lewisburg.</i>	South Seventh Street
MARY ELLA FREED,	<i>Williamsport.</i>	Women's College
ARTHUR WILLIAM FULTON,	<i>Hublersburg.</i>	No. 12, East Wing
ALLEN EDWARD GILPIN,	<i>Hawley.</i>	No. 9, East College
CLARENCE EDWARD GLASS,	<i>Reading.</i>	No. 30, East Wing
WILLIAM FREEMAN GREGG, JR.,	<i>Sunbury.</i>	No. 60, East College
HELEN MARGARET GROFF,	<i>Washington, N. J.</i>	Women's College
CHARLES GUBIN,	<i>Northumberland.</i>	No. 62, East College
EDWIN CHARLES HAGEMAN,	<i>Newark, N. J.</i>	No. 76, West College
SARA M. HAGGERTY,	<i>Nauvoo.</i>	Women's College
HILDRED HOWARD HANN,	<i>Norwich, N. Y.</i>	No. 82, East College
MARIE ELIZABETH HARER,	<i>Blossburg.</i>	Women's College
FREDERICK TWINING HARRIS,	<i>Susquehanna.</i>	No. 44, West College
WALTER GEORGE HARTMAN,	<i>Kelly Station.</i>	No. 2, East Wing

NAME.	RESIDENCE.	ROOM.
LEWIS STOUT HEINEN,	<i>Milton.</i>	Milton
SARA IRENE HILBISH,	<i>Northumberland.</i>	Women's College
FREDERICK WEISE HILL,	<i>Williamsport.</i>	No. 113, East College
HELEN IRENE HORTON,	<i>West Brownsville.</i>	South Front Street
MABEL OLIVE HORTON,	<i>West Brownsville.</i>	South Third Street
CORA EMILY HOUGHTON,	<i>North Girard.</i>	Women's College
THOMAS LEWIS JAMES,	<i>Sharon.</i>	No. 52, East College
JOHN FREDERICK JEFFERY,	<i>Wesleyville.</i>	No. 15, East Wing
HELEN JENKINS,	<i>Franklin.</i>	Women's College
DAVID HARRIS JOHN,	<i>Ellwood City.</i>	No. 1, East College
MARY LANGLEY JONES,	<i>West Pittston.</i>	Women's College
CHARLES C. KEPPLE,	<i>New Alexandria.</i>	No. 116, East College
CECELIA KITLOWSKI,	<i>Nanticoke.</i>	Women's College
GEORGIE HAZEL KURTZ,	<i>Franklin.</i>	South Sixth Street
MARTHA JUDSON LATHROP,	<i>Mt. Union.</i>	Women's College
MARY BELLE LEES,	<i>Juniata.</i>	Women's College
CYRIL ELTON LEWIS,	<i>Plymouth.</i>	No. 24½, East Wing
HELEN DERR LEWIS,	<i>Watsontown.</i>	Watsontown
VICTOR EMANUEL LEWIS,	<i>Edwardsville.</i>	No. 25, East Wing
ARCHIE MACDOUGALL LUKENS,	<i>Mt. Carmel.</i>	No. 23, East College
JOSEPH EARL MALIN,	<i>Frazer.</i>	No. 13, East Wing

NAME.	RESIDENCE.	ROOM.
JAMES STOUGHTON MATHERS,	<i>Lewisburg.</i>	South Third Street
RUTH SPRAGUE MATTERN,	<i>Huntingdon.</i>	Women's College
STERLING RAYMOND MENSCH,	<i>Wilkes-Barre.</i>	No. 83, East College
GEORGE FUNSTON MILLER,	<i>Lewisburg.</i>	South Second Street
THERESA CATHERINE MCCOLLUM,	<i>Montrose.</i>	Women's College
MARGARET MORTON MCFARLAND,	<i>Northumberland.</i>	Northumberland
OLIVER HAYES MCFARLAND,	<i>Watsonstown.</i>	Watsonstown
ELIZABETH LUCILE MCGEE,	<i>Parkersburg, W. Va.</i>	Women's College
JAMES EDWARD NANCARROW,	<i>Jersey Shore.</i>	No. 79, West College
HIRAM PERCIVAL NORMAN,	<i>Sunbury.</i>	Sunbury
MILTON JARRETT NORMAN,	<i>Sunbury.</i>	Sunbury
ERIC ADAM OESTERLE,	<i>Woodstown, N. Y.</i>	No. 55, East College
OLIVE MILLICENT PARK,	<i>Montandon.</i>	Montandon
AMY LLEWELLYN PATTERSON,	<i>Eatontown, N. J.</i>	Women's College
CLARENCE WILLIAM PETERS,	<i>Ligonier.</i>	No. 9, East Wing
DAYTON LEO RANCK,	<i>New Columbia.</i>	New Columbia
FRANK JOSEPH REESE, JR.,	<i>Latrobe.</i>	No. 55, West College
NORMAN JACOB REHMAN,	<i>Newark, N. J.</i>	No. 76, West College
ANNA LOIS REYNOLDS,	<i>Clintondale, N. Y.</i>	Women's College
ARCHIBALD MCCORMICK RIPPEL,	<i>Milton.</i>	Milton
KENNETH COLQUHOUN RITCHIE,	<i>Rahway, N. J.</i>	No. 24, East Wing

NAME.	RESIDENCE.	ROOM.
CLYDE EDWARD RUNK,	<i>Harrisburg.</i>	No. 5, East College
JEROME CRANMER SALSURY,	<i>Monroeton.</i>	No. 31, East Wing
HOMER MORRISON SANDERS,	<i>Vicksburg.</i>	No. 16, West Wing
WILLIAM LEE SHOWERS,	<i>West Milton.</i>	West Milton
ADA ALBERTA SMITH,	<i>Paxinos.</i>	Women's College
HAROLD EMERSON SMITH,	<i>Edgewood Park.</i>	No. 63, West College
JAMES RUSSELL SNYDER,	<i>Bentleyville.</i>	No. 85, East College
BAKER FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Market Street
GRACE ISABEL SUTTON,	<i>West Newton.</i>	Women's College
LESTER ALBERT SWITZER,	<i>Hawley.</i>	No. 8, East College
CHARLES EUGENE TILTON,	<i>Phillipsburg, N. J.</i>	No. 73, East College
ELNORA LOUISE TRECOTT,	<i>Berwick.</i>	Women's College
LOUIS NICOLI TRIPICIAN,	<i>Atlantic City, N. J.</i>	No. 62, West College
HARRY G. TUTHILL,	<i>Hawley.</i>	No. 7, East College
FRANK GEORGE URBANOWICZ,	<i>Mt. Carmel.</i>	No. 64, East College
PAUL W. VAN DEN BURGH,	<i>Stockport, N. Y.</i>	No. 53, West College
SHAILER WARREN VENTRES,	<i>Port Allegany.</i>	No. 13, East Wing
EMMA ESTHER WEDDLE,	<i>West Newton.</i>	Women's College
FLORA BELLE WEDDLE,	<i>West Newton.</i>	Women's College
RUTH GERTRUDE WILEY,	<i>German Valley, N. J.</i>	Women's College
RUTH WILLIAMS,	<i>Parsons.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
HENRY CHARLES WOLFE,	<i>Lewisburg.</i>	St. George Street
VIRGINIA BLANCHE WOOD,	<i>Washington.</i>	Women's College
CHARLES RHOADES WRIGHT,	<i>Trenton, N. J.</i>	No. 27, East College
RUBY JANE YOUNG,	<i>Dewart.</i>	Dewart
	Freshmen, 107.	

NON-MATRICULATES.

NAME.	RESIDENCE.	ROOM.
VINCENT FITZPATRICK,	<i>Kane.</i>	No. 57, East College
RALPH WENDELL FRYE,	<i>Monessen.</i>	No. 59, West College
CLIFFORD GILLETTE,	<i>Rushville, N. Y.</i>	No. 36, West College
NORMAN RAE HILL,	<i>Newberry.</i>	No. 57, West College
ALWYN HUGHES,	<i>Strong.</i>	Women's College
J. P. HURLBURT,	<i>Montandon.</i>	Montandon
JOHN FRANKLIN LONG,	<i>Flemington.</i>	No. 26, West College
WARREN R. MCWHINNEY,	<i>Homestead.</i>	No. 41, West College
FLOYD B. MELLANDER,	<i>Mt. Jewett.</i>	No. 22, West College
JOHN HAROLD MIDDAUGH,	<i>Williamsport.</i>	No. 78, West College
GEORGE H. NEFF, JR.,	<i>Sunbury.</i>	Sunbury
EVERT L. NOBLE,	<i>Greensburg.</i>	No. 47, East College
RUTH M. REEVES,	<i>Millville, N. J.</i>	Women's College
GRANT K. RAWSON,	<i>Holmesburg.</i>	No. 58, West College
MARY ELIZABETH RUHL,	<i>Mifflinburg.</i>	Mifflinburg
CLOYD PEOPLES ROBB,	<i>Washington.</i>	No. 89, West College
GEORGE S. SHIMER, JR.,	<i>Milton.</i>	Milton
ALMA E. THOMPSON,	<i>Williamstown.</i>	Women's College
CROSBY THOMPSON,	<i>Mt. Pleasant.</i>	No. 14, East College

NAME.	RESIDENCE.	ROOM.
EARLE TOPHAM,	<i>Philadelphia.</i>	No. 39, East College
BERTHA B. WAGNER,	<i>Watsonstown.</i>	Watsonstown
CLYDE WENRICK,	<i>Watsonstown.</i>	Watsonstown
DONALD A. WILSON,	<i>Milton.</i>	Milton
DOROTHY WOLFE,	<i>Lewisburg.</i>	St. George Street
MARION G. YOUNG,	<i>Plymouth.</i>	Women's College

Non-matriculates, 25.

SUMMARY.

Graduate Students	73
The Senior Class	72
The Junior Class	103
The Sophomore Class	120
The Freshman Class	107
Non-Matriculates	25
Total	500

THE ACADEMY.

INSTRUCTORS.

JOHN HOWARD HARRIS, PH.D., LL.D.,
PRESIDENT OF THE UNIVERSITY.

WALTER SAMUEL WILCOX, SC.M., PRINCIPAL,
MATHEMATICS.

JOSEPH LINCOLN CHALLIS, A.M.,
LATIN.

CHARLES CARPENTER FRIES, A.M.,
GREEK.

HOMER BLAINE HEDGE, A.B.,
MODERN LANGUAGES.

WEAVER WEDDELL PANGBUHN, A.B.,
LATIN AND HISTORY.

CURTIS ALBERT ZIMMERMAN, SC.B.,
SCIENCE.

JOSEPH MEIXELL WOLFE, A.M.,
REGISTRAR OF THE UNIVERSITY.

ACADEMY STUDENTS.

FOURTH FORM.

NAME.	RESIDENCE.	ROOM.
GEORGE BARNHART,	<i>Sunbury.</i>	Home
CARLOS CABALLE,	<i>Valparaiso, Chili, S. A.</i>	No. 10, East Hall
PAUL CHROPUVKA,	<i>Lansford.</i>	No. 20, East Hall
CALVIN EMERY DUNKEL,	<i>Lewisburg, R. F. D.</i>	Home
DONALD ROSS DUNKLE,	<i>Lewisburg.</i>	Home
HERBERT PAUL ELLIOTT,	<i>Mount Vernon, N. Y.</i>	No. 9, Main Hall
RALEIGH MILTON FELTON,	<i>Connellsville.</i>	No. 21, East Hall
DONALD DAVID HAYES,	<i>Hartelton.</i>	No. 11, Main Hall
JOHN ATHERTON HEBERLING,	<i>Shickshinny.</i>	No. 2, East Hall
EMERSON MONROE HECKERT,	<i>Fishers Ferry.</i>	No. 12, Main Hall
MILLER ALANSON JOHNSON,	<i>Lewisburg.</i>	Home
EDWARD MALDONADO,	<i>Merida, Yucatan, Mexico.</i>	North Fourth Street
JAMES KANE PETITTE,	<i>Yonkers, N. Y.</i>	No. 5, Main Hall
HOWELL LOCKHART SEIPLE,	<i>Center Square.</i>	No. 22, East Hall
HAROLD TYSON SHARPE,	<i>Philadelphia.</i>	No. 7, Main Hall
ALFRED TENNYSON STEININGER,	<i>Lewisburg.</i>	Home
ROY EMMETT STROHECKER,	<i>Lewisburg.</i>	Home

THIRD FORM.

NAME.	RESIDENCE.	ROOM.
ALFREDO AZNARD,	<i>Merida, Yucatan, Mexico.</i>	South Sixth Street
HARRY RETTINGER BITTERMAN,	<i>Lykens.</i>	No. 21, East Hall
CLARENCE L'VELLE BURKE,	<i>Shenandoah.</i>	No. 14, East Hall
FRANK DANOWSKI,	<i>Shenandoah.</i>	No. 13, East Hall
WILLIAM KIRK EDWARDS,	<i>Wilmerding.</i>	No. 9, East Hall
RANDALL PATRICK ELLIS,	<i>Watsontown.</i>	Home
STANLEY NEWTON HARRIS,	<i>Lewisburg.</i>	Home
WARREN BUCKALEW MCHENRY,	<i>Cambria.</i>	No. 23, East Hall
HARRY WESLEY MOORHEAD,	<i>Norristown.</i>	West Market Street
WILLIAM EMANUEL PERSING,	<i>Allenwood.</i>	Home
CHARLES AFFLERBACK REED,	<i>Philadelphia.</i>	No. 5, Main Hall
JULIUS FREDERICK SEEBACH,	<i>Lewisburg.</i>	Home
THOMAS FRANCIS SHEA,	<i>New York, N. Y.</i>	No. 6, Main Hall
FRANK LAWRENCE SULLIVAN,	<i>Passaic, N. J.</i>	No. 22, East Hall
DANIEL RIDGEWAY STEELE,	<i>Newton, N. J.</i>	No. 17, East Hall
DAVID HERBERT WILLIAMS,	<i>Scranton.</i>	No. 9, East Hall

SECOND FORM.

PAUL SCHMUCKER ALBRIGHT,	<i>Milton, R. F. D.</i>	Home
JOHN MONTGOMERY CONNER,	<i>Pittsburgh.</i>	No. 12, Main Hall

NAME.	RESIDENCE.	ROOM.
MICHAEL DANOWSKI,	<i>Shenandoah.</i>	No. 13, East Hall
FRANK DAVIS, JR.,	<i>Lansford.</i>	No. 20, East Hall
HAROLD GEARHART,	<i>Lewisburg, R. F. D.</i>	Home
WEBER LATCHA GERHART,	<i>Lewisburg.</i>	Home
GEORGE MERRILL KUNKEL,	<i>Lewisburg, R. F. D.</i>	Home
DONALD HARRINGTON McCONNELL,	<i>Atlantic City.</i>	No. 4, Main Hall
NEWTON FRANKLIN NEWMAN,	<i>Lewisburg, R. F. D.</i>	Home
PAUL BOYD PORTER,	<i>Belle Vernon.</i>	No. 6, Main Hall
ROSCOE WALTER PORTER,	<i>Baxter, R. F. D.</i>	No. 19, East Hall
JOSEPH BERNARD RYNKIEWICZ,	<i>Shenandoah.</i>	No. 14, East Hall
SAMUEL LUTHER WILLIAMS,	<i>Mt. Carmel.</i>	No. 9, Main Hall
HAROLD CLIFFORD WILSON,	<i>Elizabeth, N. J.</i>	No. 11, East Hall
CLYDE WILLIAM WITHINGTON,	<i>Snydertown.</i>	Home
GEOFFREY DWINNELL YEATON,	<i>Shamokin.</i>	No. 7, Main Hall

STUDENTS PURSUING SELECT STUDIES.

DAVID NATHANIEL BOSWELL,	<i>Lewisburg.</i>	Home
JOHN L. DAVIS,	<i>Lansford.</i>	No. 10, Main Hall
RICHARD PRATT RICHARDSON,	<i>Elizabeth, W. Va.</i>	No. 19, West College
MANUEL SURÓS,	<i>Manzanillo, Cuba.</i>	No. 8, East Hall
CARL ALFRED WALDNER,	<i>Ashland.</i>	No. 11, East Hall

SUMMARY.

The Fourth Form.....	17
The Third Form.....	16
The Second Form.....	15
The First Form.....	1
Students Pursuing Select Studies.....	5
<hr/>	
Total in the Academy.....	54

Students enrolled in other departments of the University who receive instruction in the Academy classes:

Greek	9
Latin	14
Mathematics	1
Science	7
<hr/>	
	31
Total receiving instruction in Academy classes...	85

COURSES OF STUDY.

The Academy is designed to fit pupils for College, for Teaching, or for Business. It offers three Courses of Study.

I. The Classical Course extends through four years and is arranged to meet the requirements for admission to College. The Study of Latin begins with the First Form and continues for four years and two terms. The Study of Greek begins with the Third Form and continues for two years and one term. Notwithstanding the time given to these branches of study, fully one half of the entire Course is devoted to English, Historical, Mathematical, and Scientific subjects.

II. The Latin Scientific Course extends through four years and furnishes adequate preparation for either division of the Philosophical Course in College. The First and Second Forms of the Classical and Scientific Courses are identical. In the Third and Fourth Forms, the student preparing for the Latin Division substitutes Historical and Scientific subjects for the Greek of the Classical Course; while the student preparing for the Greek Division substitutes the Greek of the Third and Fourth Forms for the Latin and includes Historical and Scientific subjects.

III. The Scientific Course extends through four years and prepares for the Courses in General Science, in Biology, in Chemistry, and in Civil, Mechanical and Electrical Engineering in College. For the Vergil and the Cicero of the Latin Scientific Course, it substitutes one term of Advanced English, one term of Chemistry, and two years of German.

Students who are able to accomplish more work in the allotted time than is required by the Course may pursue honor work in the Classics by reading, under the instructor's direction, Cæsar's Civil War, Cicero's Letters, or Vergil's Eclogues, and Books IV, V, VI of the Iliad, or the Cyropædia.

Students will be admitted to the Form for which they are prepared.

Students who do not intend to enter College, but who desire a comprehensive academic training, will find the Scientific or the Latin Scientific Course well adapted to prepare them for teaching or for business.

Special classes in History and Literature are maintained to meet adequately the requirements of applicants for examination and registration as students at law, under the rules adopted by the Supreme Court of Pennsylvania.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. CLASSICAL COURSE.

FIRST FORM.

I. TERM—Algebra, 5, Latin, 5,	U. S. History, 5, English, 5.
II. TERM.—Algebra, 5, Latin, 5,	English, 5, U. S. History, 5.
III. TERM—Geometry, 5, Latin, 5,	U. S. History, 5, English, 5.

SECOND FORM.

I. TERM—Higher Arithmetic, 5, Latin, 5,	Ancient History, 5, Rhetoric, 5.
II. TERM { Bookkeeping, Commercial Arithmetic, 5, Latin, 5,	Ancient History, 5, Rhetoric, 5.
III. TERM—Algebra, 5, Cæsar, 5,	Ancient History, 5, Literature, 5.

THIRD FORM.

I. TERM—Algebra, 5, Cæsar, 5,	Greek, 5, Elocution, 5.
II. TERM—Algebra, 5, Cæsar, 5,	Greek, 5, Literature, 5.
III. TERM—Algebra, 5, Cicero, 5,	Anabasis, 5, Literature, 5.

FOURTH FORM.

- | | |
|------------------------|--------------|
| I. TERM—Geometry, 5, | Cicero, 5, |
| Vergil, 5, | Anabasis, 5. |
| II. TERM—Geometry, 5, | { Ovid, } 5, |
| Vergil, 5, | |
| | Iliad, 5. |
| III. TERM—Geometry, 5, | Iliad, 5, |
| Vergil, 5, | Anabasis, 5. |

II. THE LATIN SCIENTIFIC COURSE.

FIRST FORM.

- | | |
|------------------------|-------------|
| I. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| II. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| III. TERM—Geometry, 5, | History, 5, |
| Latin, 5, | English, 5. |

SECOND FORM.

- | | |
|-------------------------------|---------------------|
| I. TERM—Higher Arithmetic, 5, | Ancient History, 5, |
| Latin, 5, | Rhetoric, 5. |
| II. TERM { Bookkeeping, | Ancient History, 5, |
| Commercial Arithmetic, 5, | Rhetoric, 5. |
| Latin, 5, | |
| III. TERM—Algebra, 5. | Literature, 5, |
| Cæsar, 5, | Ancient History, 5. |

THIRD FORM.

- | | |
|---|----------------|
| I. TERM—Algebra, 5, | Elocution, 5, |
| Cæsar, 5, | |
| <i>German, 5, or History of England, 5.</i> | |
| II. TERM—Algebra, 5, | Literature, 5, |
| Cæsar, 5, | |
| <i>German, 5, or Civics, 5.</i> | |

- III. TERM—Algebra, 5, Literature, 5,
 Cicero, 5,
German, 5, or Botany, 5.

FOURTH FORM.

- I. TERM—Geometry, 5, *German, 5, or French, 5,*
 Vergil, 5, *or Chemistry, 5,*
 Cicero, 5, *or Physics, 5.*
- II. TERM—Geometry, 5, *German, 5,*
 Vergil, 5, *or French, 5,*
 { Cicero, } *or Chemistry, 5,*
 { Ovid, } *or Physics, 5.*
- III. TERM—Vergil, 5, *German, 5,*
 Solid Geometry, 5, *or French, 5,*
or Chemistry, 5,
or Physics, 5.

III. THE SCIENTIFIC COURSE.

FIRST FORM.

- I. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- II. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- III. TERM—Geometry, 5, History, 5,
 Latin, 5, English, 5.

SECOND FORM.

- I. TERM—Higher Arithmetic, 5, Ancient History, 5,
 Latin, 5, Rhetoric, 5.
- II. TERM { Bookkeeping, Ancient History, 5,
 { Commercial Arithmetic, 5, Rhetoric, 5.
 Latin, 5,
- III. TERM—Algebra, 5, Literature, 5,
 Cæsar, 5, Ancient History, 5.

THIRD FORM.

- | | |
|-------------------------------------|------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Botany, 5, | German, 5,
Literature, 5. |

FOURTH FORM.

- | | |
|---|---|
| I. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | History of England, 5,
German, 5,
or French, 5. |
| II. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |
| III. TERM—Solid Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |

METHODS OF INSTRUCTION.

The Preparatory Curriculum naturally falls into eight principal lines of study, viz.: English, French, German, Latin, Greek, History, Mathematics, and Natural Science. These combine, in due proportion, the cultural, the disciplinary, and the practical elements of intermediate education. The two great divisions of modern study, the Classical and the Scientific, are recorded adequate and appropriate preparation. The subjects, facilities, and methods of the various departments are explained below.

I. THE ENGLISH LANGUAGE.

A thorough grounding in the principles of English Grammar is indispensable to the student's progress in the subsequent language studies. The continuous application of this knowledge in Composition, and the constant comparison with the forms and idioms of the Ancient Languages, prepare the way for the study of elementary Rhetoric, and the appreciative reading of English and American Literature. This work is done in the First Form.

In the Second Form a review in the principles of English Grammar is given, and a practical application of the same, together with rhetorical structure in paragraph writing and composition.

In the Third Form the first term is devoted to the study of Elocution, and the remaining two terms take up the study of Literature. The reading and study of the masterpieces of English and American Literature are maintained by means of daily recitations. The work required is identical with the "Scheme of Uniform Entrance Examinations in English Language and Literature," adopted by the "Association of Colleges and Preparatory Schools of the Middle States and Maryland." It comprises (a) careful reading of representative works of certain authors, as literature; (b) thorough study as to "subject-matter, form and structure" of other selections.

II. THE LATIN LANGUAGE.

The Course includes four and two thirds years of Latin, embracing four books of Cæsar, six orations of Cicero, six books of Vergil, and twelve hundred lines of Ovid, besides a complete Course in Grammar and Composition.

Careful drill is given in the declensions and conjugations, in the use of the moods and the sequence of tenses, in the ready reading of the Latin text, in sight reading and in accurate translations into idiomatic English. Attention is given to the important personal, historical, and political elements in the writings of Cæsar and Cicero. In Vergil, the student is introduced to the poetry, legend, religion, and art of Rome. He is taught to investigate the allegorical, archæological, and mythical allusions of the *Æneid*, and to appreciate it as the mirror of the life of the Empire. Latin prosody is taught first from the text, and then from the grammar.

III. THE GREEK LANGUAGE.

The first two terms of the Third Form are spent in a thorough study of White's First Greek Book. In the third term Xenophon's *Anabasis* is read, and special attention is given to acquiring a vocabulary and to the forms and syntax of nouns, pronouns, and adjectives. In the first half of the Fourth Form the reading of Xenophon is continued. During the last half year Homer's *Iliad* is read, and the difference between the Homeric and Attic Forms is noted. Throughout the Course, Prose Composition is frequently required for the purpose of acquiring a vocabulary and a knowledge of syntax. The Course includes four books of the *Anabasis*, four books of the *Iliad*, besides the Grammar and Prose Composition.

IV. THE GERMAN LANGUAGE.

One year's study of German is required of members of the Third and Fourth Forms of the Scientific Course. The same work may be elected by the members of the corresponding form of the Latin Scientific Course instead of the science subjects of that Course. In the study of German, the aim is a thorough acquaintance with declensions and conjugations; facility of pronunciation; quick recognition of words both by the eye and the ear; as extensive a vocabulary as the time will allow; and by constant practice the laying of a foundation for reading, writing, and speaking the language.

V. HISTORY.

The Course in History includes a survey of the History of the United States, of England, of Greece, and of Rome. The aim is to acquaint the student with the life, the genius, the institutions, and the achievements of the respective peoples, and their part in the wider history of mankind.

Additional Courses are offered in Ancient, Mediæval, and Modern History, and extra Courses in the historical readings required of applicants for examination and registration as students at law by the Supreme Court of Pennsylvania.

VI. MATHEMATICS.

Arithmetic. To students who are fitting themselves for business, a Course is given in practical business Arithmetic, involving all the ordinary problems and practices in the business world. To those who are preparing for college or for teaching, instruction is given in the theory and science of Arithmetic. Pupils are expected to master the principles and then to formulate their own rules.

Algebra. The Third Form course extends through one year, and includes a knowledge of the fundamental principles, Factoring, Divisors, and Multiples, Fractions, Equations, Involution, Evolution, Theory of Exponents, Radicals, and Quadratic Equations. Daily blackboard work serves to apply the principles taught. The student is required both to know the methods of the solution of problems and also to explain the operation to the class.

The First Form takes up Algebra for the first two terms. The work is intended to give the pupils a knowledge of algebraic principles and to assist them in their Arithmetic. The third term is devoted to Concrete Geometry and Mechanical Drawing.

Plane and Solid Geometry. The instruction consists in daily recitations for three terms on the Theorems and Problems given in the text-book, with original demonstrations of propositions by the students from hints and figures given in the classroom. Besides this, considerable attention is given to the solution of original Propositions, and the application of principles thus learned to the solution of numerical problems.

Bookkeeping. A practical introduction to the science of accounts is secured in the term devoted to mastering the principles of Double Entry Bookkeeping. Careful attention is given to business forms, to the usages of Banks, and to the elements of Commercial Law. The subject may be pursued in its more extended and intricate application, as an elective, by properly qualified students.

VII. SCIENCE.

Botany is taught by text-books, field exercise, plant analysis, and weekly lectures. A brief outline is first obtained of plant structure, physiology, growth and reproduction. The subject is

then reviewed by daily drill in analyzing, recording, classifying, and preserving specimens. The recorded analysis of fifty plants is required. Lectures explaining special forms of vegetable growth, the flora of this country, the cultivation, uses, and history of plants complete the work.

Physiology. Every effort is made to impart clear ideas of the structure, parts and functions of the human body. Special attention is given to the chemistry of foods, the laws of health, the effects of stimulants and narcotics. Suggestions are constantly made as to poisons and their antidotes, the care of the sick, disinfection and sanitation, and accidents and emergencies. Charts, manikin, and preparations are used in class.

Physics. The student is grounded in the elements of mechanics and physics. The apparatus of the College Laboratory is available for use. The historical beginnings of each subject, and subsequent development, are sketched in brief lectures. No pains are spared to familiarize the pupil with the laws of these sciences, by instruction, experiments, review, and repeated examination. The truth of principles is proved, except where the demonstration involves mathematics of the higher Course in College.

Chemistry. The Course in Chemistry extends throughout the year, and includes General Chemistry and Qualitative Analysis.

(1) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds.

(2) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds.

(3) **Qualitative Analysis.** In the first part of the term chemical reactions are studied in the laboratory, class-room, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required.

VIII. ORATORY.

Class Exercises. Members of the Fourth Form prepare and deliver one original oration each term. All other students have regular exercises in Composition and Declamation throughout the year. Public exercises are held before the faculty and students of the Academy. Visitors are cordially invited to these exercises.

In addition to the private rehearsals for the work above indicated students in the Third Form receive daily instruction in elocution during the fall term. The Course includes careful drill in the Elementary sounds in Articulation and in Expression; in Analytical Reading, including the Bible and Hymns; and the reading of Shakspeare.

IX. SPECIAL BRANCHES.

Bible Study. The study of the Bible is pursued as a regular weekly recitation throughout the First, Second, and Third Forms, in all Courses of study. A scheme of study is arranged at the beginning of each year. It is intended that the successive schemes for the various years of the Course will cover the Life of Christ, the historical portions of the Old Testament foreshadowing the Christ, and the history of the Apostolic Church.

The Study of Music may be pursued by Academic students in the School of Music.

Drawing. All students of the Academy may receive throughout the year weekly lessons in Free-hand Drawing and Penmanship without extra charge. Special individual instruction in Drawing in the Art Studio is afforded at twenty-four dollars per annum.

X. HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium affords opportunity for physical exercise. The Directors of the Gymnasium give regular class exercises to the students of the Academy. Attendance upon physical training in the Gymnasium is obligatory during the Winter Term.

The Athletic Association of the Academy has been formed to encourage and regulate athletic sports. The Association is allowed to arrange match games with other similar bodies by first securing the consent of the Principal.

PUBLIC EXHIBITIONS.

THIRD FORM.

The Public Exhibition in Declamation by the Third Form will take place on Saturday evening, April 12, 1913, in Bucknell Hall.

FOURTH FORM.

The closing exercises of the Academy will be the Public exhibition in Oratory of the Fourth Form, on June 14, 1913.

Diplomas and Certificates will be conferred Tuesday, June 17, 1913.

GENERAL INFORMATION.

ADVANTAGES.

To the student seeking preparation for College, the Academy offers unusual inducements. Its proximity to the College secures to him an atmosphere of study, acquaintance with the guides and companions of his future Course, and the benefit of numerous literary exercises to be found only in College towns. He has access to the College Library and Reading Room. The Academy is designed to fit pupils thoroughly for College and Technical Schools, and to lay broad and solid foundations for all subsequent scholarly culture and for the successful conduct of everyday affairs.

GOVERNMENT.

Students are encouraged to regard self-government as the only true government. It will be the constant endeavor to secure uprightness of character, gentlemanly deportment, and diligent application to work, by kind treatment, and high standards in conduct and study.

I. ADMINISTRATION.

1. The general control of the Academy is vested in the President of the University.

2. The government of the Academy, subject to such control, rests with the Principal of the Academy.

3. The government of each Hall is vested in the Instructor in charge, who resides in the Hall and enforces regulations for the Hours of Study, Academy Property, Hygienic Precautions, and General Deportment, and such other prudential regulations as may be ordered by the joint concurrence of the President of the University and the Principal of the Academy.

4. Each instructor shall have charge of his classes with reference to attendance upon recitations. He shall report to the Principal cases of non-attendance, and inexcusable failure on the part of students to prepare regular lessons or special work assigned.

II. VIOLATION OF RULES.

1. Any officer of the Institution becoming cognizant of any violation of the regulations by any pupil shall report the same to the Principal of the Academy, who shall make a record of the fact in a book provided for the purpose.

2. Every violation of the laws and prudential regulations of the Academy will subject the offender to a penalty of demerits, graded according to the flagrancy and frequency of the offense.

3. When the sum of a pupil's demerits equals ten it shall be the Principal's duty to notify the parent or guardian of the offender, specifying the offense; for every additional ten demerits like notification shall be made.

4. Additional disciplinary penalties in the form of reprimand, "campus," suspension, dismissal or expulsion, according to the necessities of the case, will follow repeated violations.

BUILDINGS AND ROOMS.

The Academy Buildings are described in detail in the introductory pages of the Catalogue.

The Main Building contains, besides its accommodations for other school and boarding purposes, rooms for students. The rooms are designed to accommodate two students each, and are twenty feet by twelve feet, and fourteen feet high; furnished with new folding beds, washstands, chairs, mirror and table.

The East Hall contains combined study and sleeping rooms, each designed for two students. These rooms are fifteen feet by twelve feet, with high ceilings, and contain two commodious closets and two single wire mattress beds with all necessary furniture.

ARTICLES REQUIRED.

Each student should be provided with an umbrella, overshoes, table napkins, towels, soap, and other articles usually required for personal comfort. All articles for the laundry should be marked with the owner's name.

BOARDING.

All students from a distance will occupy rooms and will board in the Academy, except for reasons jointly satisfactory to the President of the University and the Principal of the Academy.

The Principal and his family, the Instructors, and the Matron live in the building, take their meals with the boarders, and strive in all possible ways to secure the welfare and happiness of the students. The Instructors occupy rooms adjacent to the students' apartments. The appointments of the Dining Room, the character of the table supplies, the household service in general, are designed to furnish the comforts of a first-class boarding house. So far as may be warranted by the deportment of the students, there will be absent from the home life of the school all needless uniformity and irksome limitations, which disregard the reasonable individual preference of pupils.

The Academy gives to furnished rooms daily and complete attention, provides and washes all bedding and bed clothing, and supplies and cares for all lights.

Engagements for board and rooms are expected to continue without change to the end of the school year for which they are made.

APPLIANCES.

The Academy is in possession of excellent apparatus for instruction. A select Reference Library, containing Encyclopedias, Lexicons, Dictionaries, Atlases, and various other helps, is accessible to students at all hours. The Classical Recitation Rooms are provided with Kiepert's Wall Maps of Ancient Geography, and with Reinhard's Album of Ancient Antiquities, mounted. Metric, apparatus, Maps and Globes render assistance in other directions.

The apparatus of the College also is accessible to the classes for purposes of experiment and illustration.

The College Library, numbering thirty thousand volumes, is available for all students.

SCHOOLROOM.

In order to insure favorable conditions of study, the Academy maintains a commodious and well-appointed schoolroom. The school life centers in this room. Here, except when engaged in recitations, day students prepare their work, unless excused for a part of the time, for good cause; here, also, all the younger students of the lower forms prepare for their recitations. Advanced students and those of maturer years, who have acquired habits of independent study, are granted the privilege of preparing part of their work in

their rooms, provided that they maintain high scholarship and excellent deportment.

HOURS.

The time devoted to study and recitation amounts to nine hours every week-day, except Saturday, when it is only two hours. This time should be sacred to its purpose. Parents of day pupils are requested to coöperate with the school in securing attention to evening study hours, and to avoid furnishing occasions or granting excuses for absence.

Students from a distance should be in Lewisburg on the day preceding the opening of each term, and no student should leave until the term has closed. Punctuality in attendance is essential to success in school work.

For terms and vacations, see the Calendar of the University.

STANDING AND PROMOTIONS.

The weekly averages of marks for recitations are recorded, and also failures in conduct and attendance. The scale for such markings ranges from 10, or perfect, to 0, or inexcusable failure. Unexcused absences count as zero.

Monthly and term examinations are held in the studies thus far completed, and term reports of the average in scholarship, attendance, and conduct of each student are sent to parents or guardians by the Principal.

No student is promoted to the next higher class whose grade in any study is less than 7.

Students who complete the Preparatory Courses of Study are admitted to standing in corresponding divisions of the Freshman Class in the College, upon the Principal's certificate, without examination.

All students who complete in a satisfactory manner any of the Courses of Study, and who have sustained irreproachable character during their school residence, shall be entitled to the diploma of the Academy.

Students attaining an average standing of 9 are encouraged to take work additional to the Regular Courses of Study.

PRIZES.

THE HARRY S. HOPPER PRIZE.

Mr. Harry S. Hopper, of Philadelphia, Chairman of the Board of Trustees, offers an annual prize for excellence in Composition.

This prize for 1912 was awarded to Edgar Carlton Campbell.

THE DAVID PORTER LEAS PRIZE.

David P. Leas, of Philadelphia, Treasurer of Bucknell University, offers an annual prize to that member of the Third Form who shall excel in the Annual Exhibition of the Third Form in Declamation.

This prize for 1912 was awarded to Harold Tyson Sharpe.

THE PRINCIPAL'S PRIZE.

Principal Wilcox offers an annual prize to that member of the Fourth Form who shall pronounce the best oration at the Academic Graduating Exhibition.

This prize for 1912 was awarded to Norman Rae Hill.

LITERARY SOCIETY.

This is an organization of students for mutual improvement in literary and oratorical exercises. It has a large and convenient hall in the Main Academy Building, where meetings are held on Friday evenings.

RELIGIOUS SERVICES.

The duties of each day are opened with devotional exercises, which all students are required to attend. Devotional exercises are also held every evening, just before the evening study hour. All academic students residing on the University campus are required to attend these exercises.

Regular attendance at Sunday school and upon public worship at some church on Sunday morning, is required; also upon services on Thanksgiving Day, and the Day of Prayer for Colleges. Attendance upon Christian Endeavor or other like Young People's Society, and the mid-week prayer-meetings, while voluntary, is strongly urged upon students.

Parents or guardians are required to indicate to the Principal the church which they desire their sons or wards to attend.

The Academy students maintain a branch of the Young Men's Christian Association, which holds a weekly prayer-meeting on Tuesday evenings.

EXPENSES OF ACADEMY STUDENTS.

	<i>Per Annum.</i>
Tuition, Board, Furnished Room, Heating, Light, Care, Washing and Incidentals.....	\$290.00
Tuition and Incidentals to day pupils.....	85.00

A student engaging a room is required to make a deposit of ten dollars. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

All charges are payable to the Registrar of the University in advance, at the beginning of each term.

No student is entitled to his place in his class until he has made settlement for the term bills.

An extra charge will be made for washing more than twelve pieces per week.

Students who remain in the Academy during the holiday or spring vacation will be charged at the rate of \$5.00 per week. Table boarders will be charged the regular rate, \$3.50 per week.

Free scholarships covering tuition are provided in all the departments of the University for the children of Ministers of the Gospel *in actual service*. Tuition is rated at \$36 a year.

The expenses for Music and Printing for Exhibition and Anniversary occasions are paid by the classes for which such expenses are incurred.

For information respecting the Academy, address the President of the University, or the Principal, Walter S. Wilcox, Sc.M.

THE INSTITUTE.

INSTRUCTORS AND OTHER OFFICERS.

JOHN HOWARD HARRIS, PH.D., LL.D.,
PRESIDENT OF THE UNIVERSITY.

THOMAS ALPHEUS EDWARDS, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN,
AND INSTRUCTOR IN PSYCHOLOGY AND ETHICS.

EMMA LOUISE BUSH, A.B., PRECEPTRESS,
TEACHER OF GERMAN.

MARGARET ELLEN KALP, A.B.,
TEACHER OF ENGLISH AND HISTORY.

MARY GEORGIANA STANTON, PH.B.,
TEACHER OF LATIN AND ENGLISH.

EDITH SCHILLINGER,
TEACHER OF ELOCUTION AND GYMNASTICS.

PAUL GEORGE STOLZ, A.M.,
ASSISTANT DIRECTOR OF THE SCHOOL OF MUSIC.

CHARLOTTE G. ARMSTRONG,
TEACHER OF INSTRUMENTAL MUSIC.

BUCKNELL UNIVERSITY

BESSIE SUTHERLAND RICE, B.S.,
TEACHER OF VOCAL MUSIC.

HARRIET MAY HOLLINGSHEAD,
TEACHER OF INSTRUMENTAL MUSIC.

GEORGIANA K. SCOTT,
TEACHER OF ART.

CURTIS ALBERT ZIMMERMAN, SC.B.,
TEACHER OF SCIENCE.

JOSEPH MEIXELL WOLFE, A.M.,
REGISTRAR.

DIRECTORY OF THE ALUMNÆ.

OFFICERS OF THE ALUMNÆ ASSOCIATION.

President, ELIZA J. MARTIN, SC.B.

Vice President, MISS EMMA BEAVER.

Recording Secretary, MISS HELEN HARE.

Corresponding Secretary, MRS. JENNIE FOLLMER, Lewisburg.

Treasurer, MISS MARIE LEISER.

Board of Managers,

THE OFFICERS OF THE ASSOCIATION, AND MRS. C. A. HARE,
AND MRS. H. M. McCLURE.

The Alumnæ Association holds its anniversary on Monday afternoon of Commencement week.

OFFICERS OF THE LEWISBURG ALUMÆ CLUB.

President, MRS. JENNIE FOLLMER.

Vice President, MRS. JENNIE DAVIS PHILLIPS.

Secretary, MRS. GRACE SLIFER DRUM.

Treasurer, MISS EUDORA HAMLER.

The Lewisburg Alumænæ Club meets at the Women's College on the second Tuesday of each month during term-time.

OFFICERS OF THE PHILADELPHIA ALUMNÆ CLUB.

President, MISS MARY WOLFE, M.D.

Vice Presidents, MRS. I. H. O'HARRA, MISS HANNAH GOODMAN.

Recording Secretary, MISS LETITIA MATHEWS.

Corresponding Secretary and Treasurer, MRS. DEWEY A. COBB,
3227 Race Street, Philadelphia.

The Dean of the Department for Women will esteem it a favor if any graduate who changes her residence will give notice of her new address. He will also be grateful for any information that will assist in making the directory of the graduates and former students complete.

NAMES OF STUDENTS.

GRADUATES, CLASS OF 1912.

NAME.	RESIDENCE.
MARY MORRIS CLAYTON,	Lewisburg
NELLIE M. FOLLMER,	Lewisburg
MARGARET CHRISTINE GRETZINGER,	Lewisburg
MARGARET FAYE HARTER,	Loganton
MARGARET MCCLURE,	Lewisburg
ELEANOR EMMA PROSS,	Lewisburg
HELEN DOWLING WAINWRIGHT,	Columbus, N. J.
ISABELLE BOWMAN WOLFE,	Lewisburg

THE SENIOR CLASS.

NAME.	RESIDENCE.	ROOM.
EVA ELIZABETH BROWN,	<i>Lewisburg.</i>	West Lewisburg
ALICE JOHNSON,	<i>Lewisburg.</i>	University Avenue

THE FOURTH YEAR CLASS.

KATHERINE CLAYTON,	<i>Lewisburg.</i>	Walker Street
DARLE DAVIS,	<i>Allenwood.</i>	Allenwood
EDITH VIRGINIA FOCHT,	<i>Lewisburg.</i>	South Second Street
EDNA ELEANOR SAYENGA,	<i>Carriick.</i>	South Sixth Street

THE THIRD YEAR CLASS.

MARY MAGDALENE BUBB,	<i>Dalmatia.</i>	South Seventh Street
MAY ANGELINE EVERITT,	<i>Vicksburg.</i>	Vicksburg
GRACE KATHERINE EVERITT,	<i>Vicksburg.</i>	Vicksburg
RUTH PYLES,	<i>Camp Springs, Md.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
ELIZABETH STEPHENS,	<i>Lewisburg.</i>	South Sixth Street

PURSUING SELECT STUDIES.

RHEDA BITTENBENDER,	<i>Plymouth.</i>	Women's College
MARY NINA BOSWELL,	<i>Lewisburg.</i>	South Third Street
CATHERINE HEINEN,	<i>Milton.</i>	Milton
MAME HERB,	<i>Snydertown.</i>	Snydertown
ALWYN HUGHES,	<i>Mt. Carmel.</i>	Women's College
MARGARET JACOBS,	<i>Milton.</i>	Women's College
VIOLA JONES,	<i>Trevorton.</i>	Women's College
JEANNETTE OWENS,	<i>Lewisburg.</i>	Lewisburg
EVA REINHARDT,	<i>Taylor.</i>	Women's College
GRACE SAVAGE,	<i>Uwchland.</i>	Women's College
ALMA ELLEN THOMPSON,	<i>Williamstown.</i>	Women's College
VIOLET VOUGHT,	<i>Paxinos.</i>	Women's College
MIRIAM GRACE WEAVER,	<i>Rebersburg.</i>	Women's College
HELEN WEDEKINDT,	<i>Buffalo.</i>	Women's College
KATHRYN WITMER,	<i>Sunbury.</i>	Women's College

SUMMARY.

Senior Class	2
Fourth Year Class.....	4
Third Year Class.....	5
Pursuing Select Studies.....	15
Total	26

STUDENTS IN ELOCUTION.

NAME.	RESIDENCE.
RHEDA BITTENBENDER,	Plymouth
MARY BOSWELL,	Lewisburg
EDGAR CAMPBELL,	Shunk
FLOSSIE CLARK,	Sunbury
OLIVE COOPER,	Cortland, N. Y.
RALEIGH FELTON,	Connellsville
CARRIE FORESMAN,	Lewisburg
FLORENCE GOOD,	El Dorado
SARA HAGGARTY,	Navoo
CORA HOUGHTON,	North Girard
JANE IREY,	Danville
ALICE JOHNSON,	Lewisburg
EMMA KEISER,	Mt. Carmel
HARRY KELLY,	Brookville
LUCILE MCGEE,	Lewisburg
AMELIA MCSPARRAN,	Philadelphia
LOIS REYNOLDS,	Clintondale, N. Y.
GRACE SAVAGE,	Uwchland
MARIAN SHIVERS,	Haddonfield, N. J.
ELIZABETH SPYKER,	Lewisburg
RALPH TALBOT,	Martin's Ferry, Ohio
SAMUEL PAUL TEAMER,	Melvern
VIOLET VOUGHT,	Paxinos
BLANCH WOOD,	Washington
MARIAN YOUNG,	Plymouth

Students in Elocution, 25.

STUDENTS IN ART.

GRADUATES, 1912.

NAME.	RESIDENCE.
HELEN HARE,	Lewisburg
CHARLOTTE SHIELDS,	Lewisburg

STUDENTS.

RHEDA BITTENBENDER,	Plymouth
MABEL BOYER,	Mt. Pleasant
RACHEL DAVIS,	Woodstown, N. J.
RUTH EDWARDS,	Williamsport
CATHERINE HEINEN,	Milton

NAME.

RESIDENCE.

CAROLYN HOPPER,	Lewisburg
CHARLES HORAM,	Lewisburg,
VIOLA JONES,	Trevorton
SALLIE McSPARRAN,	Philadelphia
ETHEL PETERSON,	Penn's Grove, N. J.
HELEN WEDEKINDT,	Buffalo, N. Y.

PUBLIC SCHOOL ART.

KATHERINE HOPPER,	Lewisburg
HELEN HOUGHTON,	Lewisburg
EMMA HOUSEL,	Lewisburg
FRANCES KERSTETTER,	Lewisburg
ELLA LAWSHEE,	Lewisburg
VERNA NOLL,	Lewisburg
MARY YOUNG,	Lewisburg

Students in Art, 18.

COURSES OF STUDY.

The Bucknell Institute offers to young women three courses of study, each extending over five years. Students are admitted to advanced standing, if upon examination they are found to have satisfactory knowledge of the branches which the class they propose to enter has already completed.

Credentials from Graded Schools are accepted in the studies of the First and Second Years.

Credentials are accepted for the Third and Fourth Years from schools whose curricula are equivalent to that of Bucknell Institute; also from accredited private teachers, in studies which are *continued* after entrance.

I. THE GENERAL COURSE.

The General Course embraces, in MATHEMATICS, Arithmetic, common and advanced, Algebra and Geometry, plane and solid, and Higher Algebra with Trigonometry and Analytical Geometry as electives; in LATIN, four years; in GERMAN, two years, and a third year elective with FRENCH; in FRENCH, one year; and in ITALIAN and SPANISH, an optional course; in SCIENCE, Physical Geography, Botany, Physics, Physiology, Chemistry. In these branches the students have the advantages afforded by the College Observatory, Laboratory, and Museum. The Course also includes Rhetoric, Composition, Civil Government, Psychology, Ethics, and History of Art.

Special attention is given to History and Literature, to the former of which six and to the latter of which three terms are devoted, besides the reading of English and American authors required for admission to College.

Attention is also given to preparation of the student for home-making, and for the study of Domestic Science, Household Art, Hygiene and Sanitation.

II. THE CLASSICAL COURSE.

The Classical Course embraces, in MATHEMATICS, Arithmetic, Algebra, Geometry, plane and solid, University Algebra, Trigonom-

etry and Analytical Geometry; in LATIN, Grammar and Composition, Cæsar, Vergil, Cicero's Orations, Ovid, Cicero *de Senectute et de Amicitia*, Livy, and Velleius, in all, five years; in GREEK, Grammar and Composition, Xenophon's Anabasis, Homer's Iliad, Lysias' Orations, Plato's Apology, Homer's Odyssey, and the Greek Testament, in all, three years; in HISTORY, General History, and Greek and Roman History.

Students who complete the Classical Course are admitted to the Sophomore Class in College as candidates for the first degree in Arts.

III. THE LATIN SCIENTIFIC COURSE.

The Latin Scientific Course corresponds to the Classical Course except that scientific subjects are substituted for the first two years of Greek, and German for the third year of Greek.

Students who complete the Latin Scientific Course are admitted to the Sophomore Class in College as candidates for the first degree in Philosophy.

Students in the fifth year Classical or Latin Scientific Course recite to the professors in the College.

Students who do not wish to pursue a Course of study may elect such subjects in connection with recitations of the regular classes as they may be qualified to pursue.

AGE REQUIREMENT FOR ADMISSION

The required age for admission to the first-year class or to pursue select studies is twelve years, and a proportionate increase of age for admission to advanced classes.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. THE GENERAL COURSE.

FIRST YEAR.

- | | |
|--|--------------------------|
| I. TERM—Algebra, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |
| II. TERM—Algebra, 5,
Latin, 5,
Drawing, 5, | English, 4,
Bible, 1. |
| III. TERM—Geometry, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |

SECOND YEAR.

- | | |
|--|--|
| I. TERM { Commercial Arithmetic, 5,
Business Forms,
Cæsar, Introduction, 5,
Ancient History, 5, | Rhetoric, 4,
Bible, 1. |
| II. TERM—Bookkeeping, 5,
Cæsar, 5, | Ancient History, 5,
Literature, 4,
Bible, 1. |
| III. TERM—Physical Geography, 5,
Cæsar, 5,
Ancient History, 5, | Literature, 4,
Bible, 1. |

THIRD YEAR.

- | | |
|------------------------|----------------|
| I. TERM—Algebra, 5, | Elocution, 4, |
| Cæsar, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| History of England, 5, | |
| II. TERM—Algebra, 5, | Literature, 4, |
| Cicero, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| Civics, 5, | |
| III. TERM—Algebra, 5, | Literature, 4, |
| Cicero, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| Botany, 5, | |

FOURTH YEAR.

- | | |
|-----------------------|-------------------------|
| I. TERM—Geometry, 5, | German, 5, <i>or</i> |
| Vergil, 5, | Chemistry, 5, <i>or</i> |
| Cicero, 5, | Physics. 5. |
| II. TERM—Geometry, 5, | German, 5, <i>or</i> |
| Vergil, 5, | Chemistry, 5, <i>or</i> |
| { Cicero, } 5, | Physics. |
| { Ovid, } | |
| III. TERM—Vergil, 5, | German, 5, <i>or</i> |
| Geometry, | Chemistry, <i>or</i> |
| | Physics. |

SENIOR YEAR.

- | | |
|------------------------|-----------------|
| I. TERM—Psychology, 5, | Bible, 1. |
| Rhetoric, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Solid Geometry, 5, | |
| Physiology, 5, | |

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|---------------------------------|-----------------|
| II. TERM—English Literature, 5, | Bible, 1. |
| Child Psychology, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Algebra, 5, | |
| Physiology, b, 5, | |
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|-------------------------|-----------------|
| III. TERM—Ethics, 5, | Bible, 1. |
| American Literature, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Trigonometry, 5, | |
| Physiology, c, 5, | |

Senior students select with the approval of the Dean three major subjects, in the Senior year, General Course.

II. THE CLASSICAL COURSE.

FIRST YEAR.

- | | |
|---------------------|-------------|
| I. TERM—Algebra, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |
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- | | |
|----------------------|-------------|
| II. TERM—Algebra, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |
-
- | | |
|------------------------|-------------|
| III. TERM—Geometry, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |

SECOND YEAR.

- | | | |
|-----------|---------------------------|--------------|
| I. TERM { | Commercial Arithmetic, 5, | Rhetoric, 4, |
| | Business Forms, | Bible, 1. |
| | Cæsar, Introduction, 5, | |
| | Ancient History, 5, | |

- II. TERM—Bookkeeping, Ancient History, 5,
 Business Forms, Literature, 4,
 Cæsar, 5, Bible, 1.
- III. TERM—Physical Geography, 5, Literature, 4,
 Cæsar, 5, Bible, 1.
 Ancient History, 5,

THIRD YEAR.

- I. TERM—Algebra, 5, Elocution, 4,
 Cæsar, 5, Bible, 1.
 Greek, 5,
- II. TERM—Algebra, 5, Literature, 4,
 Cicero, 5, Bible, 1.
 Greek, 5,
- III. TERM—Algebra, 5, Literature, 4,
 Cicero, 5, Bible, 1.
 Greek, Anabasis, 5,

FOURTH YEAR.

- I. TERM—Geometry, 5, Cicero, 5,
 Vergil, 5, Greek, Anabasis, 5,
- II. TERM—Geometry, 5, { Cicero, } 5,
 Vergil, 5, { Ovid, }
 Iliad, 5.
- III. TERM—Geometry, 5, Iliad, 5,
 Vergil, 5, Anabasis, 5.

SENIOR YEAR.

- I. TERM—Solid Geometry, 5, Bible, 1,
 Cicero de Senectute, 5, Composition, 1,
 { Greek Prose Composition, 5, Elocution, 1.
 { Odyssey,
- II. TERM—Algebra, 5, Bible, 1,
 Livy, 5, Composition, 1,
 { Lysias, Elocution, 1.
 { Greek Testament, 5,

- III. TERM—Trigonometry, 5, Bible, 1,
 Velleius and Pliny, 5, Composition, 1,
 { Plato, Elocution, 1.
 { Greek Testament, 5,
-

III. THE LATIN SCIENTIFIC COURSE.

FIRST YEAR.

- I. TERM—Algebra, 5, English, 4,
 Latin, 5, Bible, 1.
 History, 5,
- II. TERM—Algebra, 5, English, 4,
 Latin, 5, Bible, 1.
 Drawing, 5,
- III. TERM—Geometry, 5, English, 4,
 Latin, 5, Bible, 1.
 History, 5,

SECOND YEAR.

- I. TERM { Commercial Arithmetic, 5, Rhetoric, 4,
 { Business Forms, Bible, 1.
 Cæsar, Introduction, 5,
 Ancient History, 5,
- II. TERM { Bookkeeping, Ancient History, 5,
 { Commercial Arithmetic, 5, Literature, 4,
 Cæsar, 5, Bible, 1.
- III. TERM—Physical Geography, 5, Literature, 4,
 Cæsar, 5, Bible, 1.
 Ancient History, 5,

THIRD YEAR.

- I. TERM—Algebra, 5, Elocution, 4,
 Cæsar, 5, Bible, 1.
 German, 5, *or*
 History of England, 5,

- II. TERM—Algebra, 5,
Cicero, 5,
German, 5, *or*
Civics, 5,
Literature, 4,
Bible, 1.
- III. TERM—Algebra, 5,
Cicero, 5,
German, 5, *or*
Botany, 5,
Literature, 4,
Bible, 1.

FOURTH YEAR.

- I. TERM—Geometry, 5,
Vergil, 5,
Cicero, 5,
German, 5, *or*
Chemistry, 5,
Physics.
- II. TERM—Geometry, 5,
Vergil, 5,
{ Cicero, } 5,
{ Ovid, }
German, 5, *or*
Chemistry, 5, or
Physics, 5.
- III. TERM—Geometry, 5,
Vergil, 5,
German, 5, *or*
Chemistry, or
Physics.

SENIOR YEAR.

- I. TERM—Algebra, 5,
Cicero de Senectute, 5,
German, 5, *or*
French, 5,
Bible, 1,
Composition, 1,
Elocution, 1.
- II. TERM—Trigonometry, 5,
Livy, 5,
German, 5, *or*
French, 5,
Bible, 1,
Composition, 1,
Elocution, 1.
- III. TERM—Analytics, 5,
Velleius and Pliny, 5,
German, 5, *or*
French, 5,
Bible, 1,
Composition, 1,
Elocution, 1.

METHODS OF INSTRUCTION.

I. PSYCHOLOGY AND ETHICS.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Child Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Physiological Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

The aim in the Course in Ethics is to make the instruction as practical as possible. Theses on problems in Ethics are required of each student taking the subject, in addition to recitations from text-books.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology and Ethics are open as electives to College women.

II. PHYSIOLOGY.

The Course in Physiology, with special reference to Domestic Science, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on. The Course then enters upon the subject of Domestic Sanitation—house location, soil, water, air, light, drains, cellars, and so on; plumbing, ventilation, sources of water supply, disinfection after contagious diseases, and so on.

III. CHEMISTRY.

Descriptive Chemistry is taught by text-books, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the student in writing formulæ and solving chemical equations. To accomplish this, each student will be expected to spend at least five hours each week in the Laboratory, studying the characteristics and reactions of the elements and their compounds, and performing the experiments outlined in the text and lectures. Notes will be kept by each student, describing the experiment and giving the equation which represents the reaction taking place.

The Course in Chemistry extends as a major throughout the year. It is taught with especial reference to domestic science. It treats especially of applications to daily life in the household, air, water, detergents, food materials.

IV. GENERAL COOKERY.

Lectures and demonstrations are given to the whole student body of the Women's Department, each term, by specialists in Domestic Art. The lectures in the winter term, 1913, were given by Mrs. Anna B. Scott, expert in Domestic Art of the *North American*.

V. LITERATURE AND ART.

LITERATURE is taught by topical outlines, the elaboration of which depends upon a sympathetic study of the masterpieces in connection with the lives and times of the writers. The subject is so presented that a vital experience results rather than an empty form of knowledge. The object of the Course is to cultivate and ennoble the emotions, to stimulate the imagination, and to reinforce the will with strong and exalted motives.

(a) The Advanced Course in Rhetoric consists of daily themes, recitations, and consultations.

(b) English Literature is designed to give a general knowledge of the history of English literature from the Elizabethan to the Victorian periods, inclusive.

(c) American Literature is given with special reference to the national period.

THE HISTORY OF ART is offered in the Senior Year, General Course. The aim of the Course is to give a general knowledge of the development of art and to lead to an acquaintance with individual artists and their work. Some attention is given to the theories concerning the origin of the art-impulse itself, and the law of the mental evolution which has governed the history of art.

A full Course in HOUSEHOLD ART is offered by the Art Department.

VI. HISTORY.

History. Six terms are devoted to this study. The Course embraces General History, the History of the United States, of England, of Greece, and of Rome. Efforts are made to show the learner that History is not mere facts in chronological order, but a record of the development of civilization.

Civil Government. The origin and growth of our institutions, the functions of the various departments of the National, State, and local governments, the political history of the people, the interpretation and construction of the Constitution, are discussed.

VII. THE ENGLISH LANGUAGE.

Rhetoric is taught as a practical aid to English Composition. Daily exercises in composition are required.

English Composition is required throughout the Course. Classes in Composition meet weekly for general criticism and the assignment of work. One essay is required from each student monthly, and an exercise in rapid and concise writing is required weekly.

VIII. THE LATIN LANGUAGE.

Paradigms of Declension and Conjugation with the Principles of Syntax, are introduced gradually, after many illustrations. English sentences are translated into Latin, readiness in Latin Composition and a correct style being thus acquired.

The following Courses are offered: 1. Latin Grammar and Lessons; 2. Eutropius; 3. Cæsar, Gallic War; 4. Vergil, *Æneid*; 5. Cicero, Orations; 6. Ovid; 7. Cicero, *de Senectute*, and Livy; 8. Livy, Books XXI and XXII; 9. Velleius and Pliny.

IX. THE GREEK LANGUAGE.

The first half of the Third Year is spent in acquiring sufficient knowledge of forms and inflections to commence the study of Xenophon's *Anabasis*. During the last half year, special attention is given to the inflection and syntax of nouns, pronouns, and adjectives. The reading of Xenophon is continued in the first term of the Fourth Year, and the forms and syntax of verbs made a special study. Homer is then read for one term and a half, and the difference between Homeric and Attic forms is noted. During the last half term Xenophon is reviewed, that the student may refresh her knowledge of Attic Greek, and may not find her transition to College needlessly difficult. Almost daily drill is given in turning into Greek, sentences based on the text of Xenophon.

The following Courses in Greek are offered to students in the Classical Course: 1. Greek Lessons; 2. Xenophon's *Anabasis*; 3. Homer's *Iliad*; 4. Lysias' *Orations*; 5. Homer's *Odyssey*; 6. Plato's *Apology*; 7. Greek New Testament.

X. MODERN LANGUAGES.

1. French, Italian, and Spanish. The modern languages are taught by comparing them with the mother tongue of the pupil, if there be any relation between them. If there is none, they are compared with the Latin and Greek languages. In French, rules are taught by which the words that are not exactly the same in the two languages are easily made into French.

French Syntax is taught by examples and illustrations from readings. The grammar is taught from the language, and not the language from the grammar.

As far as practical only French is spoken in the classroom. Extracts are read from the best French literature. Conversations are held in French on the readings, stories are related, and compositions prepared in French by the pupil.

The aim is to teach the modern languages so that they can be spoken correctly.

The same method is used in teaching Spanish and Italian.

2. German. In the study of German the aim is to get knowledge of the language in an all-round way. This is accomplished not alone through the study of grammar and the translation of German into English, but by daily practice in conversation, the committing to memory of poems and idioms, and through

an acquaintance with biography and the different phases of German life. As little English as practicable is used in the classroom. Throughout the course there is constant sight reading, translation at hearing, and translation from English into German.

The reading of the second year includes the best German authors studied in connection with Keller's History of German Literature.

XI. MATHEMATICS.

Commercial Arithmetic. Two objects are considered in teaching the subject; first, to give the student a practical knowledge of all ordinary business problems and calculations; second, to develop her ability to think logically and rapidly. The memorizing of rules and mechanical processes is not required, but independent thought, logical analysis and neatness, clearness and accuracy in all written work are demanded.

Business Customs. A practical course in business records, involving the use of the cash book, the ledger, the day-book, etc. Students are required to make out bills and receipts, to use check books, and to make deposits in bank, using the proper forms. This practical work is supplemented by lectures on commercial banks, savings banks and building loan associations, insurance, mortgage and bond investments, and letters of credit.

Elements of Algebra. Three terms are given to this subject. There is thorough drill in the fundamental operations, and the idea that these are simply the applications of arithmetical processes to symbols of general value is kept constantly in mind. The Course includes Quadratic Equations, Theory of Exponents, Variation, and Series.

Geometry. The Course includes Plane and Solid Geometry. Besides the demonstrations of Theorems given in the text-book, original demonstrations and the solution of problems are required.

Higher Algebra. The topics discussed are: Progressions, Theory of Limits, Differentiation, Development of Functions into Series, Convergency and Summation of Series, Logarithms, Compound Interest and Annuities, Permutations and Combinations, Probability, Continued Fractions, and the Theory of Equations.

Trigonometry. The Course includes Plane and Spherical Trigonometry. Time is given to the numerical illustrations of principles for the purpose of making sure that the meaning and use of formulæ demonstrated and learned are thoroughly understood.

Analytical Geometry. The student is taught the elementary properties of the right line and the conic sections. The Course is intended to give a clear conception of the methods of Cartesian Analysis, rather than extensive knowledge of its results.

XII. SCIENCE.

Physics. The student is thoroughly grounded in the elements of mechanics and physics. The historical beginnings of each subject, and subsequent developments, are sketched in brief lectures. No pains are spared to familiarize the pupils with the laws of these sciences by instruction, experiment, review, and repeated examination. The truth of principles is proved, except where the demonstration involves the higher mathematics. The apparatus of the College is available for class use.

Physical Geography lays a broad foundation for subsequent work in all sciences. Special attention is given to the physical features of the United States. Drawings, photographs, colored and relief maps, and specimens from the Museum and field work aid to make the subject clear.

Botany is taught by text-book and field work. A brief outline is first obtained of plant structure, physiology, growth, and reproduction. Lectures explaining special forms of vegetable growth, and the flora of this country, complete the work.

PHYSICAL CULTURE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Institute Gymnasium is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Institute Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

ÆSTHETIC CULTURE.

It is intended that the pupils of the Institute shall have the influence unconsciously received from painting, music, and refined surroundings, as well as direct instruction in Literature, Music, and Art. Special instruction in Music and Art is given in the schools devoted to those subjects.

SOCIAL CULTURE.

Pupils are trained to observe the usages of good society. Meetings of various organizations for improvement in Literature, Music and Art and receptions in charge of the pupils add variety to student life. No effort is spared to give the pupils the advantages of a cultured home. The purpose is to develop the social life of the Institution within itself. Students are not permitted, during term-time, to visit in neighboring towns. The number of social functions during the term is limited, and the consent of the Dean must be obtained for each function at least one month before it is to occur.

RELIGIOUS TRAINING.

The Institute is distinctly Christian in its influence. Morning and evening Chapel in the Hall of the Institute building is attended by all students in the Institute Courses, special students, and women pursuing studies in the School of Music. College women living in the Institute attend evening Chapel.

Attendance upon Sabbath school and church services in town is required. All students have weekly recitations in Inductive Bible Study. The students have organized several classes for Scripture study.

The Young Women's Christian Association, a voluntary society open to the officers and students of the Institute, meets weekly. The regular Tuesday evening prayer-meeting, missionary and temperance work, special Bible Classes, are in charge of this Association.

SPECIAL BRANCHES.

1. Italian and Spanish may be taken up as optional studies. All optional studies must be pursued in connection with the regular classes.

2. Bible instruction is given once a week throughout the entire Course.

3. Essays are required of all students each month, and themes each week.

4. Two declamations are required of each student during each term.

5. Exercises in either Elocution or Reading are required once a week of all classes.

PUBLIC EXERCISES.

THE EXERCISES OF THE GRADUATING CLASS.

The Commencement Exercises of the Institute are held in the College Commencement Hall on Tuesday afternoon of Commencement week.

THE EXERCISES OF THE FOURTH YEAR CLASS.

The exercises of the Fourth Year Class, a combined musical and literary entertainment, are held in the Chapel of the Institute on the last Saturday evening in the month of April.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Institute, takes place in Bucknell Hall on the second Saturday evening in the month of May.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized in connection with Bucknell Institute an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnæ and friends of the Institute. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able.

But for the help of this Association, some of the best of our graduates would have been deprived of the training which has fitted them for the positions they now fill as teachers, authors, missionaries, and pastors' helpers.

During the last twenty-six years seventy-seven young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association; five dollars annually, an Active Member.

Contributions should be sent to the Treasurer, Mrs. John T.

Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katharine B. Larison, Lewisburg, Pa., or Mrs. Calvin A. Hare, Corresponding Secretary, Lewisburg, Pa.

DEPARTMENT OF ELOCUTION.

MISS EDITH SCHILLINGER.

This department is open to all members of the Institute. Its aim is the correct and effective utterance of thought. Special attention is given to Voice Culture, Articulation, including Pronunciation and Expression. Weekly Rhetoricals afford opportunity for platform work. Bible reading and study of Shakspeare have places in the Course. Special Courses are offered to students who wish to take private lessons in elocution. Particular attention is given to curing persons of stammering and other defects in speech.

THE ART DEPARTMENT.

MISS GEORGIANA K. SCOTT.

The facilities for the study of Art have been greatly increased by the accommodations allotted to this Department, in a special studio, which provides such adjustments for admission of light, and unencumbered wall surface as to render it adapted for the execution and display of art productions.

The Art Department offers a three year Course leading to graduation for persons who wish to take the Art Course for culture, or for teaching or for Household Art. The Courses are varied to suit the requirements of different pupils, but in the amount and quality of work done, and diploma awarded, the Courses are equal.

I. REGULAR COURSE IN ART.

FIRST YEAR.

Drawing—Geometric, common objects and the antique—setting forth the correct principles of perspective, proportion and light and shade.

Mediums—Charcoal, pencil and colored crayons, Nature study, plant analysis and elementary design.

Theory of color—color matching and color harmony.

Construction Work—Paper cutting; raffia and leather.

SECOND YEAR.

Lectures—Principles of design.

Lecture—History of art.

Advanced plant analysis.

Sketches from historic ornament.

Original designs, using geometric, historic and floral motifs, in stencils, oil cloth, linoleums, dress prints, wall paper, rugs, tiles, laces, embroideries, menu and place cards.

Construction—Basketry, tooled leather and pottery.

Instruction in fancy sketches for embroidery purposes.

THIRD YEAR.

Still life, human figure, flowers and landscape.

Mediums—Pastels, water colors and oils.

Lecture—Keramics.

China decorating from original designs, conventional and naturalistic.

Practical instruction in managing the kiln.

Household decoration—plans of homes, displaying correct taste in furnishings.

II. SPECIAL COURSES.

A. ARTS AND CRAFTS.

All work is based on original designs including stencils, cut and tooled leather, book-binding, pierced and hammered metal, basketry in raffia and reed work, and weaving.

Lectures—Design.

Lectures—Theory of color, color harmony.

Sketches of historic ornament.

KERAMICS.

All work is based on original designs.

Pottery.

China decorating, conventional and naturalistic treatment.

Lectures—History of Keramics and the various styles.

Lecture—Theory of color, color matching and color harmony.

Practical instruction in managing of the kiln.

B. HOUSEHOLD ART.

1. Lectures—Theory of color, color matching, color harmony.

2. History of art.

3. Lectures—Home development from primitive times to our present day homes. Plans of homes in sketch from which one is selected and the student proceeds to express her ideal as to appropriate furnishings for various rooms, including wall and floor coverings, draperies and furniture.

4. Artistic table decoration executed in water colors, with menu and place cards, candle shades, etc.

5. Original design for embroidery articles for the home with instruction in stitches entirely finished according to the laws of harmony.

Special Courses are given to those who want to devote shorter time to the work. Such students may select from the Courses such work as they are competent to take.

Charges for instruction in Art are for all Courses \$12 per term or \$36 per school year.

Special individual instruction in Painting.. \$1.00 per lesson

All bills must be paid to the Registrar of the University, within the first ten days of each term.

Freehand Drawing is a part of the required work of the school without extra charge.

ART EXHIBIT.

On Saturday, Monday, and Tuesday of Commencement week, a display of art products by the pupils of the School of Art is made in the Studio. At this time a committee of Art students receives and entertains all those who visit the Studio.

GENERAL INFORMATION.

ADVANTAGES.

The Bucknell Institute offers to young women superior educational advantages. Its location in a University town assures an atmosphere of study on the benefit of numerous literary exercises, lectures, and addresses. The students in the Institute have the use of the Library and apparatus of the Institute, and also of the College, Astronomical Observatory, Chemical Laboratory, Museum and Library, and the various apparatus of the University. An isolated school could not provide for itself these advantages at a cost of less than a quarter of a million dollars.

During the year 1905 about forty thousand dollars was expended in enlarging and improving the women's buildings.

ADMINISTRATIVE AND OTHER REGULATIONS.

1. The general control of the Women's College, Institute, and School of Music is vested in the President of the University.

2. The government of the Institute, subject to such control, rests with the Dean.

3. Young women, whether attending the College, Institute, or School of Music, are subject to the rules and regulations governing young women attending the Women's College.

RULES.

The laws governing the Women's College are enacted by the Board of Trustees and a copy is given to each student when she enters the Institution.

Any officer of the Institute becoming cognizant of violation of regulations by any pupil shall report the same to the Dean, who shall make a record of the fact in a book provided for the purpose. Any second violation by the same pupil shall be reported to the President of the University; and if, in the judgment of the President of the University and the Dean, the offense be of sufficient gravity, the parent or guardian of the offending pupil shall be notified.

Violations of the regulations of the Women's College or infraction of the laws of morality are punished by private reprimand, deprivation of privileges, or private withdrawal from the Institution.

Summary punishment may be inflicted whenever the interests of the Institution demand it.

PRIZES.

I. BUCKNELL PRIZES.

The following prizes were founded by William Bucknell, of Philadelphia:

1. A First Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

2. A Second Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the second best essay.

For the year 1912 the First Prize of twenty-four dollars was awarded to Eleanor Pross, and the Second Prize of sixteen dollars to Helen Wainwright.

3. A Third Senior Prize to be awarded to the member of the graduating class who shall attain the highest grade in the studies of the Senior Year. This excludes all grades of studies not in the Senior Year, all Senior Studies taken before the Senior Year, and all studies not taken in the Institute.

For the year 1912 this prize of twenty-five dollars was awarded to Mary M. Clayton.

4. A First Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the best Fourth Year essay.

5. A Second Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the second best Fourth Year essay.

For the year 1912 these prizes were awarded as follows: Eva E. Brown received the First Prize of twenty dollars; Ada A. Smith the Second Prize of fifteen dollars.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from the following works:

For 1912 Shakspeare's Merchant of Venice, Scott's Marmion, Macaulay's Samuel Johnson, Milton's Comus, L'Allegro, and Il Penseroso.

II. THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1912 the prize was awarded to Jeanette Owens.

EXPENSES OF INSTITUTE STUDENTS.

I. Boarding Students. The regular charge for Boarding Students is \$290.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

Students are charged extra for the washing of dresses, and for the washing of more than twelve pieces per week.

For the rooms in the Bucknell Cottage and in New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students amount to \$85.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing and Painting, and Music will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence on account of sickness.

The expenses for Music, Printing, and other charges ordinarily incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$5.00.

Free scholarships, covering tuition, are awarded to children of Ministers of the Gospel *in actual service*.

For information respecting the Institute, address the Dean of the Department for Women, Thomas A. Edwards, A.M., or the President of the University.

BUCKNELL SCHOOL OF MUSIC.

INSTRUCTORS.

THOMAS ALPHEUS EDWARDS, A.M.,

DEAN.

PAUL GEORGE STOLZ, A.M.,

ASSISTANT DIRECTOR. HARMONY, SCIENCE OF MUSIC.

CHARLOTTE G. ARMSTRONG,

VIOLIN AND PIANO.

HARRIET MAY HOLLINGSHEAD,

PIANO AND PIPE ORGAN.

BESSIE SUTHERLAND RICE, B.S.,

HARMONY AND VOCAL MUSIC.

NAMES OF STUDENTS.

NAME.	COURSE.	RESIDENCE.
EDNA IRENE ANGSTADT,		Lewisburg
	<i>Teacher's Course, Piano, Clavier.</i>	
MARIAN RUTH BANCROFT,		Altoona
	<i>Piano.</i>	
GRACE EVALYN BARR,		Shamokin
	<i>Piano.</i>	
DOROTHY WEAVER BARRETT,		Milton
	<i>Voice.</i>	
LESLIE BARTOL,		Watsonstown
	<i>Piano.</i>	
GEORGE BENDER,		Lewisburg
	<i>Piano.</i>	
DOROTHY LOUISE BENFER,		Lewisburg
	<i>Piano.</i>	
RHEDA BITTENBENDER,		Plymouth
	<i>Piano.</i>	
MARY NINA BOSWELL,		Lewisburg
	<i>Voice, Piano, Harmony, History.</i>	
DAVID BOSWELL,		Lewisburg
	<i>Voice, Piano.</i>	
MYRTLE BOWSER,		Sunbury
	<i>Voice, Harmony.</i>	
GUY BROSIUS,		Rauchtown
	<i>Piano.</i>	
ELLA MARTHA BROWN,		Milton
	<i>Voice, Piano.</i>	
LUCY BROWN,		Lewisburg
	<i>Piano.</i>	
MARY BROWN,		Braddock
	<i>Piano.</i>	
RUTH BROWN,		Lewisburg
	<i>Piano.</i>	
MARY MAGDALENE BUBB,		Dalmatia
	<i>Piano.</i>	

NAME.	COURSE.	RESIDENCE.
LESLIE CAMPBELL,	<i>Piano.</i>	Shunk
HARRIET CARPENTER,	<i>Voice.</i>	Woodbury, N. J.
NED CHURCH,	<i>Voice.</i>	Mifflinburg
FLOSSIE CLARK,	<i>Piano, Voice.</i>	Sunbury
HELEN MARIAN CLARK,	<i>Voice.</i>	Sunbury
ETHEL CLUSH,	<i>Violin, Harmony, History.</i>	Sunbury
MILES ELTON DEAN,	<i>Voice.</i>	Altoona
RUTH HORTENSE EDWARDS,	<i>Voice.</i>	Williamsport
EDNA EISLEY,	<i>Piano, Voice.</i>	Lewisburg
ARTHUR EVANS,	<i>Piano.</i>	Wilkes-Barre
PAULINE FEGLEY,	<i>Piano.</i>	Lewisburg
ANNA MAY FISHER,	<i>Piano.</i>	Lewisburg
EMELINE FISHER,	<i>Piano.</i>	Lewisburg
NELLIE FOLLMER,	<i>Piano.</i>	Lewisburg
ETHEL BENNET GALLOWAY,	<i>Piano, Harmony, History.</i>	Lewisburg
MARWOOD GLOVER,	<i>Piano, Harmony.</i>	Collingdale
HELEN GROFF,	<i>Piano.</i>	Washington, N. J.
GEORGE FREEMAN HAINES,	<i>Voice.</i>	Winfield
MARTHA HANN,	<i>Piano.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
MRS. WILLIAM S. HEINEN,	<i>Voice.</i>	Milton
NORMAN RAY HILL,	<i>Voice.</i>	Newberry
CLARA MATILDA HINE,	<i>Piano.</i>	Lewisburg
SARAH HAGGERTY,	<i>Piano.</i>	Nauvoo
MADALINE HOUGHTON,	<i>Piano.</i>	Watsontown
HELEN HOUGHTON,	<i>Voice.</i>	Lewisburg
JANE IREY,	<i>Voice.</i>	Danville
MARGARET JACOBS,	<i>Piano, Harmony, History.</i>	Milton
VIOLA JONES,	<i>Piano, Harmony, History.</i>	Trevorton
EMMA KEISER,	<i>Pipe Organ, Voice, History.</i>	Mt. Carmel
ELIZABETH KERCHNER,	<i>Voice.</i>	Sunbury
MILDRED RUTH KIRK,	<i>Guitar.</i>	Lewisburg
MARY KLING,	<i>Piano.</i>	Lewisburg
WILMA KNAPP,	<i>Voice, Harmony.</i>	Hawley
NAOMI KOCH,	<i>Piano.</i>	Sunbury
HELEN KRAMER,	<i>Voice.</i>	Watsontown
MAME GERTRUDE KRAMER,	<i>Piano, Harmony.</i>	Muncy
GUY KROMER,	<i>Voice.</i>	Milton
ARTHUR KROUSE,	<i>Violin.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
MARTHA LATHROP,	<i>Piano, Harmony.</i>	Mt. Union
HELENE LEDIARD,	<i>Piano, Harmony, History.</i>	Brooklyn, N. Y.
RAMONA LENINGTON,	<i>Violin.</i>	Scranton
RUTH LENINGTON,	<i>Piano, Voice.</i>	Scranton
WALLACE CLINE LOWTHER,	<i>Piano.</i>	Punxsutawney
ROBERT MACHAMER,	<i>Cornet.</i>	Lewisburg
HELEN LEHR MANIFOLD,	<i>Piano, Harmony.</i>	Turbotville
EVELYN MCGANN,	<i>Piano.</i>	Lewisburg
JENNIE McLAUGHLIN,	<i>Piano, History.</i>	Lewisburg
SALLIE McSPARRAN,	<i>Piano.</i>	Philadelphia
WALTER MEEK,	<i>Violin.</i>	Allenwood
JANET STEELE MENCH,	<i>Teacher's Course, Piano.</i>	Mifflinburg
KATHRYN MILLER,	<i>Piano.</i>	Lewisburg
FLORENCE MITCHEL,	<i>Piano.</i>	Penn's Grove, N. J.
FRED MOORE,	<i>Organ.</i>	Milton
IRENE MUFFLEY,	<i>Piano.</i>	Turbotville
RALPH NOLL,	<i>Piano.</i>	Lewisburg
RUTH PYLES,	<i>Piano.</i>	Camp Springs
EVA REINHARDT,	<i>Piano, Harmony, History.</i>	Taylor

NAME.	COURSE.	RESIDENCE.
EDGAR LLOYD ROGERS,	<i>Voice.</i>	Nittany
NETA SHEEP,	<i>Voice.</i>	Milton
MYRTLE SHIPMAN,	<i>Voice, Harmony.</i>	Sunbury
MARIAN ESTHER SHIVERS,	<i>Piano.</i>	Haddonfield, N. J.
IRWIN SHORTESS,	<i>Voice.</i>	Lewisburg
BOYD SMITH,	<i>Piano.</i>	Watsontown
KATHERINE STAHL,	<i>Piano.</i>	Lewisburg
HARRIET SOPER,	<i>Voice.</i>	Sunbury
RALPH LEE TALBOT,	<i>Piano.</i>	Martin's Ferry, Ohio
EDNA TATOR,	<i>Voice.</i>	Milton
SAMUEL PAUL TEAMER,	<i>Piano.</i>	Malvern
ALMA ELLEN THOMPSON,	<i>Piano, Voice, History.</i>	Williamstown
ALFRED SMITH VAN OSTEN,	<i>Voice.</i>	Philadelphia
VIOLET VOUGHT,	<i>Piano, Harmony, History.</i>	Paxinos
KATHERINE WAGNER,	<i>Piano.</i>	Lewisburg
KATHRYN WAINRIGHT,	<i>Piano.</i>	Lewisburg
MIRIAM GRACE WEAVER,	<i>Piano, Voice, Harmony.</i>	Rebersburg
HELEN WEDEKINDT,	<i>Piano, Organ, Voice, Harmony, History.</i>	Buffalo, N. Y.
FLORENCE WEIDENHAMMER,	<i>Voice.</i>	Milton

NAME.	COURSE.	RESIDENCE.
EDNA ALICE WHITTAM,	<i>Piano.</i>	Chester
KATHRYN WITMER,	<i>Piano, Voice, Harmony, History.</i>	Sunbury
RUTH WILLIAMS,	<i>Voice.</i>	Parsons
ETHEL WOLFE,	<i>Violin, Voice.</i>	Lewisburg
HENRY WOLFE,	<i>Violin.</i>	Lewisburg

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GRADUATES, 1912.

NAME.	RESIDENCE.
EDNA IRENE ANGSTADT,	Lewisburg
ELIZABETH KERCHNER,	Sunbury
JANET STEELE MENSCH,	Mifflinburg

COURSES OF STUDY.

The School of Music is under the general supervision of the Dean of the Department of Women, but has its own corps of instructors, each a specialist in his line. The Courses are designed to afford every needed facility for the study of Vocal and Instrumental Music. An ample supply of instruments from the best makers is provided for practice.

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *Etudes* by Biehl, Lemoine, LeCouppéy, Bertini and Czerny; introductory technical work; *Sonatinas*, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46 and 47; Loeschorn, Op. 66; Czerny, Op. 299; Berens, Op. 61; *Easier Mozart, Haydn, Beethoven Sonatas*;

Little Preludes by Bach; Bach Inventions, Scales, Arpeggios and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 Studies; Clementi Gradus ad Parnassum; Moscheles, Op. 70; Bach Suites, Handel Suites, Scarlatti pieces, Beethoven Sonatas; introductory Chopin work; compositions by Grieg, Godard, MacDowell, Moszkowski and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerto; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Etudes; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements and purposes of each student.

COURSE FOR PIPE ORGAN.

This Course is based upon:

Dudley Buck's Pedal Studies, and upon the works of Rink, Batiste, Lefébure-Wely, Guilmant, and others.

COURSE FOR THE VIOLIN.

The Course is based upon:

The methods of Wohlfahrt, Schubert and others for elementary students; the first part of De Beriot's School; Thirty-six Studies, Kayser; De Beriot's Second and Third Positions; Mazas Etudes Specials; Hermann's One Hundred Studies; Violin School Ovide Musin; Bowing Studies, Casorti; Forty Studies, Kreutzer; Thirty-six Etudes, Fiorilla. Pieces and solos by the best writers for the instrument are used throughout the Course to develop style, phrasing, etc. Sonatas by Beethoven, Gade, Grieg and others, and concertos of Rode and Viotti are required for graduation.

COURSE FOR THE VIOLONCELLO.

Instruction for this instrument is based upon:

Méthode Pratique pour de Violoncello, par S. Lee; studies by Piatti and Romberg.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies, by Campagnoli.

COURSE FOR CONTRABASSO (DOUBLE BASS).

Bottesini's Method.

VOICE CULTURE.

COURSE OF THREE YEARS FOR GRADUATION.

Careful instruction is given in the use of the voice, and the correct manner of producing purity of tone. To secure control over the voice and gain for it flexibility, fullness, and durability, thorough drills are afforded in such technical exercises as:

Lamperti's and Vannuccini's Italian Methods, Vocalises of Sieber, Concone, Lütgen, Vaccai, Bonaldi, Bordogni, Marchesi, and Ponafka; Lamperti's Studies in Bravura Singing. For expression and the development of a pure style, practice is afforded in singing the best English, German, Italian, and French Songs, Operatic Arias and Solos from the Oratorios.

Careful instruction and drill are given in sight-singing; and all students seeking to complete the Course in Voice Culture are expected to acquire reasonable proficiency in this branch of the art of music.

COURSE IN HARMONY.

The study of Harmony is included in the other musical work, and a sound knowledge of its principles is required of all graduates of the School of Music. The text-books used are: Bussler's Harmonic Exercises, Homer Norris's Practical Harmony, Richter's Counterpoint, and Reicha's Course of Musical Composition, or equivalents.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

TUITION.

Extra tuition is charged for instruction in Music, as follows:

	<i>Per Annum.</i>
Vocal Music	\$60 00
Music on Piano <i>or</i> Organ.....	60 00
Violin	60 00
Harmony, in Class.....	18 00
Harmony, in private lessons.....	60 00
Use of Instruments for practice.....	10 00
Guitar and Mandolin, in Class.....	15 00
	<i>Per Lesson.</i>
Special individual instruction in Music.....	\$1 00

No reduction is made except in case of protracted illness.

Instruction in the Orchestra and in Harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute Courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$245 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1912 this prize was divided between Edna Irene Angstadt and Elizabeth Kerchner.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

For information respecting the School of Music, address the President of the University, or the Dean, Thomas Alpheus Edwards.

UNIVERSITY CALENDAR.

1913.

SPRING RECESS.

Second Term Ends,....	Wednesday, March 19
Third Term Begins,.....	Wednesday, March 26
Sermon before the Christian Association,.....	Sunday, April 6
Declamation of the Third Form, Academy,....	Saturday, April 12
Exercises of the Fourth-Year Class, Institute,..	Saturday, April 19
Contest in Elocution, Institute,.....	Saturday, May 3
Exhibition of the Junior Class, College,.....	Friday, May 9
Examinations,.....	Tuesday to Friday, June 13
Exhibition, School of Music,.....	Friday, June 13
Baccalaureate Sermon,.....	Sunday, June 15
Sermon before the Education Society,.....	Sunday, June 15
Examinations for Admission to College,.....	Monday, June 16
Meeting of the Alumnæ of the Institute,.....	Monday, June 16
Annual Meeting of the Trustees,.....	Tuesday, June 17
Annual Meeting of the Alumni,.....	Tuesday, June 17
Graduation of the Fourth Form, Academy,....	Tuesday, June 17
Graduating Exercises of the Institute,.....	Tuesday, June 17
Oration before the Alumni,.....	Tuesday, June 17
ANNUAL COMMENCEMENT, the 63d,....	Wednesday, June 18

SUMMER VACATION.

Fall Examinations for Admission to College,	Wednesday, September 17
First Term Begins,.....	Thursday, September 18
Election of Class Officers, 3 p. m.,.....	Friday, September 19
Reception by Christian Association,.....	Saturday, September 20
Introductory Address,.....	Monday, September 22
Matriculation,	Tuesday, November 25
Thanksgiving (recess of three days).....	Thursday, November 27
First Term Ends,.....	Wednesday, December 17

1914.

Second Term Begins,.....	Tuesday, January 6
Second Term Ends,.....	Wednesday, March 18
Third Term Begins,.....	Wednesday, March 25

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Franklin Printing Comp
Philadelphia

Bucknell University Bulletin.

THIRTEENTH SERIES JANUARY, 1914

No. 4



CATALOGUE

1913-1914



Published Bi-monthly by the Bucknell University,
Lewisburg, Pennsylvania.

Entered at the Post Office at Lewisburg, Pa., as Second-Class Matter, July 3, 1901

THE
SIXTY-FOURTH CATALOGUE
OF THE
OFFICERS AND STUDENTS
OF
Bucknell University:
COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1913-1914

DEPARTMENTS.

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CALENDAR.

The Winter Term Ends.....	Wednesday, March 18, 1914
The Spring Term Begins.....	Wednesday, March 25, 1914
Annual Commencement	Wednesday, June 17, 1914
The Fall Term Begins.....	Thursday, September 17, 1914
The Fall Term Ends.....	Wednesday, December 16, 1914
The Winter Term Begins.....	Tuesday, January 5, 1915

BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one and a quarter million dollars. The productive investment amounts to over eight hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIETT BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE.

PATRONS are those who have given one thousand dol-

lars or more, but less than ten thousand. (The names of Patrons will be published first in the Catalogue for 1915, by which time a complete list may be made up.)

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalogue of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees at its meeting in January, 1903, authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the loan fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large, active loan fund accumulates.

(f) A fund for the retirement of professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose:

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever.

ORGANIZATION.

The University comprises four Schools:

I. THE COLLEGE offers nine Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence.
4. The Course in General Science.
5. The Course in Biology.
6. The Course in Chemical Engineering.
7. The Course in Civil Engineering.
8. The Course in Electrical Engineering.
9. The Course in Mechanical Engineering.

II. THE INSTITUTE for young women has three Courses of study, the General, the Classical, and the Scientific, leading to diplomas which admit to the Sophomore year in College.

III. THE ACADEMY is designed to fit young men for College, either for the Classical, Philosophical, Scientific, or Technological Courses.

IV. THE SCHOOL OF MUSIC has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

These schools are one corporation, have one President, who has general charge, with a Principal in more immediate charge of each of the subordinate departments. All expenses are met from funds in the hands of a common treasurer.

THE BOARD OF TRUSTEES.

- CHAIRMAN, HARRY S. HOPPER, A.M.,
28 South Third Street, Philadelphia.
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1701 Chestnut Street, Philadelphia.
- TREASURER, DAVID PORTER LEAS, A.M.,
400 South Fortieth Street, Philadelphia.
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| HON. E. A. ARMSTRONG, A.M. | GEN. CHARLES MILLER, A.M. |
| JOHN P. CROZER, A.M. | GEORGE M. PHILIPS, PH.D., LL.D. |
| COL. JOHN J. CARTER, A.M. | A. JUDSON ROWLAND, D.D., LL.D. |
| PRES. MILTON G. EVANS, D.D. | HON. JOSEPH C. SIBLEY, LL.D. |
| PRES. JOHN H. HARRIS, LL.D. | LEROY STEPHENS, D.D. |
| HARRY S. HOPPER, A.M. | JAMES S. SWARTZ, A.M. |
| PRES. LINCOLN HULLEY, LL.D. | HON. F. J. TORRANCE, A.M. |
| MR. JOHN D. JOHNSON. | HON. ERNEST L. TUSTIN, A.M. |
| DAVID PORTER LEAS, A.M. | CHARLES S. WALTON, A.M. |
| JOSEPH K. WEAVER, A.M., M.D. | |
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MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January Philadelphia.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION.

A. JUDSON ROWLAND, D.D., *Chairman.*

MILTON G. EVANS, D.D.	LINCOLN HULLEY, LL.D.
REV. LEROY STEPHENS, D.D.	HON. ERNEST L. TUSTIN, A.M.
GEORGE M. PHILIPS, PH.D., LL.D.	RALPH A. AMERMAN,
AND THE PRESIDENT.	

COMMITTEE ON FINANCE.

JAMES S. SWARTZ, A.M., *Chairman.*

DAVID PORTER LEAS, A.M.	JOHN P. CROZER, A.M.
HARRY S. HOPPER, A.M.	HON. JOSEPH C. SIBLEY, LL.D.
JOSEPH K. WEAVER, M.D.	HON. E. A. ARMSTRONG, A.M.
HON. FRANCIS J. TORRANCE, A.M.	CHARLES S. WALTON, A.M.
AND THE PRESIDENT.	

COMMITTEE ON BUILDINGS AND LIBRARY.

HON. HAROLD M. MCCLURE, A.M., *Chairman.*

GEN. CHARLES MILLER, A.M.	PRES. JOHN H. HARRIS, LL.D.
COL. JOHN J. CARTER, A.M.	

COMMITTEE ON PUBLICATION.

LEROY STEPHENS, D.D., *Chairman.*

DAVID PORTER LEAS, A.M.	MILTON G. EVANS, D.D.
AND THE PRESIDENT.	

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, Museum of Natural History and Recitation rooms.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms.

Several thousand dollars have been expended recently in improving this College building.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Asso-

ciation, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College. In it the students of the College meet for worship.

V. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D.C.L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred and fifty thousand volumes.

VI. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteen wire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

VII. THE CHEMICAL LABORATORY.

The Laboratory is forty-three feet in width and eighty-six feet in length, with two stories above the basement. In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Organic Science; the basement has rooms for Applied Chemistry, and a fireproof room. The attic contains a room for dissection in Human Anatomy.

VIII. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the heating and lighting plant of the institution; the main

story, with one room twenty by fifty and another forty by forty-five, is used for shop work.

IX. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the roof. At the height of twelve feet a running-track gallery, six feet wide, surrounds the room.

X. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XI. THE ACADEMY.

1. **The Main Building** of the Academy is situated on "College Hill," and is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Principal's office; on the second floor are suites of rooms for the Principal and his

family and for the Matron. The third floor is used for students' rooms, each twenty feet by twelve feet, and fourteen feet high.

2. The East Hall of the Academy is the Bucknell Cottage for young men, and is contiguous to the Main Building and connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet in width, and is finished in natural wood. The building contains a general study room, a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

Both buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

XII. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College, in the Institute, and in the School of Music.

1. The Main Building contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, music rooms, recitation rooms, and a dining hall; on the second floor a school-room and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. The South Hall, erected in 1869, is devoted to students' rooms, except the third story, which is used as a gymnasium. This gymnasium has been lately improved and equipped.

3. The Bucknell Cottage stands to the southwest of the Main Building, and is connected with it by an enclosed

passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and closets on either side. In this building is the **Studio**, a spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. New Cottage for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The **Calisthenium** occupies the upper story, and has a floor surface of over four thousand feet.

All the buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

5. The Campus of the Women's College is separated from the main College grounds by Loomis Street.

XIII. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XIV. THE PRESIDENT'S HOUSE.

The Corporation also owns a house for the use of the President of the University.

THE COLLEGE.

THE FACULTY AND OTHER OFFICERS.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

* FREEMAN LOOMIS, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES AND LITERATURE.

WILLIAM CYRUS BARTOL, A.M., PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

FRANK ERNEST ROCKWOOD, A.M., LL.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE AND DEAN OF
THE COLLEGE.

WILLIAM GUNDY OWENS, A.M.,
PROFESSOR OF CHEMISTRY.

ENOCH PERRINE, A.M., LITT.D.
PROFESSOR OF THE ENGLISH LANGUAGE AND LITERATURE AND
SECRETARY OF THE FACULTY.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D.,
NEW JERSEY PROFESSOR OF THE GREEK LANGUAGE AND LITERATURE.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
PROFESSOR OF LOGIC AND SOCIOLOGY.

NELSON FITHIAN DAVIS, SC.D.,
PROFESSOR OF BIOLOGY.

* Retired.

EPHRAIM M. HEIM, PH.D.,
PROFESSOR OF ECONOMIC AND POLITICAL SCIENCE.

GUIDO CARL LEO RIEMER, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES.

LLEWELLYN PHILLIPS, A.M., D.D.,
JOHN P. CROZER PROFESSOR OF RHETORIC AND ORATORY.

THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY AND DEAN OF THE DEPARTMENT FOR WOMEN.

HENRY THOMAS COLESTOCK, A.M., PH.D.,
PROFESSOR OF HISTORY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND MECHANICAL DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FLOYD GEORGE BALLENTINE, PH.D.,
ASSISTANT PROFESSOR OF LATIN.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNAEUS DRUM, A.M.,
ASSISTANT PROFESSOR OF MATHEMATICS.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

BROMLEY SMITH, A.M.,
INSTRUCTOR IN ORATORY AND RHETORIC.

LEO LAWRENCE ROCKWELL, A.M.,
INSTRUCTOR IN GERMAN.

CHARLES CARPENTER FRIES, A.M.,
INSTRUCTOR IN RHETORIC.

HAROLD MURRAY McCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND NOTES AND ON AGENCY.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
LIBRARIAN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR OF THE UNIVERSITY.

FRANK EUGENE BURPEE, A.M.,
SUPERINTENDENT OF BUILDINGS AND GROUNDS.

ADMISSION OF STUDENTS.

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

Three of these units are equal to a Carnegie unit.

I. GENERAL REQUIREMENTS.

Candidates for admission to any of the Courses must pass examination in the following:

1. ENGLISH (nine units).

a. Writing from dictation.

b. English Grammar.

c. Elements of Rhetoric—Invention, Style, and Punctuation.

d. A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. Reading.—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple

questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics; or Chemistry.

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the Æneid;
 - c. Ovid, 1200 lines.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).
 - a. Seven Orations of Cicero;
 - b. Six Books of the Æneid;
 - c. Ovid, 1200 lines.
2. SOLID GEOMETRY (one unit).
3. Any eight units selected from group E.

2. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).
 - a. Greek Grammar;
 - b. Greek Prose Composition;
 - c. Greek Reader;
 - d. Four Books of Xenophon's Anabasis;
 - e. Three Books of Homer's Iliad.
2. SOLID GEOMETRY (one unit).

3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the Course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN OR FRENCH.

The Grammar of the Language, Composition and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates of Bucknell Institute, in any of the General Courses, will be admitted to the Sophomore year of the corresponding Course in the College.

Graduates from Bucknell Academy, in any of the Courses, will be admitted to the corresponding Course in the College upon the Diploma of the Academy.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the **College Entrance Examination Board** are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be

admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismissal. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his department that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismissal given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismissal be granted to any

student who has not discharged all his pecuniary obligations to the Institution. No papers of dismissal or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismissal are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers nine Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of which extends through two years of the Course and the latter through four years, and also twelve lecture courses.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three courses in German or French.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four courses of German or French, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College courses in either of the Ancient Classical languages or nine College courses in a Modern language in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The Course in Jurisprudence is designed for persons preparing for the

legal profession, for a business career, and for participation in public affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or French for admission and at least four courses of college work in German or French as requisites for graduation.

V. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VI. The Course in Chemical Engineering, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Science if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

VIII. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

IX. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

X. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

I. TERM—Solid Geometry, Cicero de Senectute and Livy, { Odyssey, { Greek Prose Composition,	Rhetoric, I, Oratory, I.
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II. TERM—Higher Algebra, Livy, { Lysias' Orations, { Greek Testament,	Rhetoric, I, Oratory, I.
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III. TERM—Trigonometry, Velleius and Pliny, { Plato's Apology, { Greek Testament,	Rhetoric, I, Oratory, I.
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SOPHOMORE YEAR.

I. TERM—Rhetoric, Horace,	Astronomy, I, or History of Art, I, <div style="text-align: center;">Oratory, I.</div>
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ELECTIVE STUDIES:

<i>German,</i> <i>French,</i> <i>Greek History,</i>	<i>American History, a,</i> <i>Chemistry,</i> <i>Surveying,</i> <div style="text-align: center;"><i>Analytical Geometry.</i></div>
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II. TERM—English Literature,
Demosthenes,

Oratory, I.

Astronomy, I, or
History of Art, I,

ELECTIVE STUDIES:

Roman History,
American History, b,
Latin, 6,
German,
French,

Logic,
Chemistry,
Differential Calculus,
Advanced Algebra,
Physiology.

III. TERM—Civics, or Economic History,

History of Art, I.

ELECTIVE STUDIES:

Public Address,
Argumentation,
Juvenal,
German,
French,

Anthropology,
Botany,
Chemistry,
Integral Calculus,
Elements of Law.

JUNIOR YEAR.

I. TERM { Psychology,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

Æschylus and Sophocles,
Latin, 8,
English, 6 or 7,
German,
French,
History, Oriental,
Economics,

Real Property,
Sociology,
Physiological Psychology,
Biology,
Embryology,
Chemistry,
Mechanics,

Geology.

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Comparative Psychology,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>German,</i>	<i>Animal Histology, a,</i>
<i>French,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English, a,</i>	<i>Higher Analytics,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Contracts,</i>	<i>Municipal Government.</i>

III. TERM—Theism, III,	History of Education, I,
History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Latin, 10,</i>	<i>Cryptogamic Botany,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Entomology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Constitutional Law,</i>	<i>Physics.</i>

SENIOR YEAR.

I. TERM	{ Social Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Greek, 15,</i>	<i>School Administration,</i>
<i>Greek Testament,</i>	<i>International Law,</i>
<i>Latin, 11,</i>	<i>Comparative Anatomy,</i>
<i>Anglo-Saxon,</i>	<i>Chemistry,</i>
<i>English, 4 or 9,</i>	<i>Geology,</i>
<i>German,</i>	<i>Geodetic Astronomy,</i>
<i>French,</i>	<i>Personal Property,</i>
<i>Medieval History,</i>	<i>Advanced Ethics.</i>

II. TERM	{ Political Ethics, I,
	{ Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona,</i>	<i>Philosophy of Mind,</i>
<i>Greek Testament,</i>	<i>History, 11,</i>
<i>Latin, 12,</i>	<i>History of Europe, a,</i>
<i>Roman Life,</i>	<i>Comparative Politics,</i>
<i>Chaucer,</i>	<i>Public Finance,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Economic Geology,</i>
<i>Psychology of Education,</i>	<i>Human Anatomy, b,</i>
<i>Agency,</i>	<i>Advanced Composition.</i>

III. TERM—Literature, I, or
Forestry, I,

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Philosophy of Education,</i>
<i>Greek Testament,</i>	<i>History of Europe, b,</i>
<i>Latin, 13,</i>	<i>Private Corporations,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>French,</i>	<i>Bills and Notes.</i>
<i>Shakspeare,</i>	<i>Chemistry,</i>
<i>History of Philosophy,</i>	<i>Forestry,</i>
<i>Railroad Transportation.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

I. TERM—Higher Algebra, Rhetoric, I,
Cicero de Senectute and Livy, Oratory, I.
German or French,

II. TERM—Trigonometry, Rhetoric, I,
Livy, Oratory, I.
German or French,

- III. TERM—Analytical Geometry, Rhetoric, I,
 Velleius and Pliny, Oratory, I.
German or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I, or
 Horace, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, *American History, a,*
French, *Chemistry,*
Greek History, *Surveying.*

- II. TERM—English Literature, Astronomy, I, or
 Oratory, I, History of Art, I.

ELECTIVE STUDIES:

Roman History, *Physiology,*
American History, b, *Chemistry,*
Latin, 6, *Differential Calculus,*
German, *Advanced Algebra,*
French, *Logic.*

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Argumentation, *Anthropology,*
Public Address, *Elementary Law,*
Juvenal, *Botany,*
German, *Chemistry,*
French, *Integral Calculus.*

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 Thesis,

ELECTIVE STUDIES:

Latin, 8, *Sociology,*
German, *Economics,*
French, *Physiological Psychology,*
English, 6 or 7, *Biology,*
History, Oriental, *Embryology,*
Real Property, *Chemistry,*
Mechanics.

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Advanced Logic,</i>
<i>English, 8,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Contracts.</i>	

III. TERM—Theism, III,
History of Philosophy, II,

History of Education, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Entomology,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Cryptogamic Botany,</i>	<i>Physics,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 11,</i>	<i>School Administration,</i>
<i>German,</i>	<i>International Law,</i>
<i>French,</i>	<i>Personal Property,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>Medieval History,</i>	<i>Geology,</i>
<i>Advanced Ethics,</i>	<i>Geodetic Astronomy.</i>

- II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 12,</i>	<i>Roman Private Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Philosophy of Mind,</i>	<i>Human Anatomy, b,</i>
<i>Psychology of Education,</i>	<i>Agency,</i>
<i>Advanced Composition.</i>	

- III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Latin, 13,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>History of Europe, b,</i>	<i>Forestry,</i>
<i>Bills and Notes,</i>	<i>Railroad Transportation.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

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|-------------------------|--------------|
| I. TERM—Higher Algebra, | Rhetoric, I, |
| Odyssey, | Oratory, I. |
| German or French, | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| { Lysias' Orations, | Oratory, I. |
| { Greek Testament, | |
| German or French, | |

- III. TERM—Analytical Geometry, Rhetoric, I,
 { Plato's Apology, Oratory, I.
 { Greek Testament,
 German or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I, or
 Greek History, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

American History, a, French,
German, Chemistry,
 Surveying.

- II. TERM—English Literature, Astronomy, I, or
 Demosthenes, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, Logic,
French, Physiology,
Roman History, Chemistry,
American History, b, Differential Calculus,
 Advanced Algebra.

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Argumentation, Elements of Law,
Public Address, Botany,
German, Anthropology,
French, Chemistry,
 Integral Calculus.

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 { Thesis,

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>Sociology,</i>
<i>German,</i>	<i>Economics,</i>
<i>French,</i>	<i>Physiological Psychology,</i>
<i>English, 6 or 7,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Mechanics.</i>	

II. TERM	{	Ethics,	Sanitary Science, I.
		Thesis,	

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English, 8,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Municipal Government,</i>	<i>Higher Analytics,</i>
<i>Advanced Logic,</i>	<i>Contracts,</i>
<i>Municipal Sociology.</i>	

III. TERM—Theism, III,	History of Education,
History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Entomology,</i>
<i>Journalism,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, 6,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Zoölogy of Vertebrates,</i>	<i>Physics,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek</i> , 15,	<i>Advanced Ethics</i> ,
<i>Greek Testament</i> ,	<i>School Administration</i> ,
<i>Anglo-Saxon</i> ,	<i>International Law</i> ,
<i>English</i> , 4 or 9,	<i>Personal Property</i> ,
<i>German</i> ,	<i>Comparative Anatomy</i> ,
<i>French</i> ,	<i>Chemistry</i> ,
<i>Medieval History</i> ,	<i>Geology</i> .

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona</i> ,	<i>Psychology of Education</i> ,
<i>Greek Testament</i> ,	<i>Roman Life</i> ,
<i>Chaucer</i> ,	<i>Comparative Politics</i> ,
<i>German</i> ,	<i>Public Finance</i> ,
<i>French</i> ,	<i>Chemistry</i> ,
<i>Philosophy of Mind</i> ,	<i>Economic Geology</i> ,
<i>History of Europe</i> , a,	<i>Human Anatomy</i> , b.
<i>Agency</i> ,	<i>Advanced Composition</i> .

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato</i> , <i>Phaedo</i> ,	<i>Philosophy of Education</i> ,
<i>Greek Testament</i> ,	<i>Bills and Notes</i> ,
<i>German</i> ,	<i>History of Europe</i> , b,
<i>French</i> ,	<i>Roman Law</i> ,
<i>Shakspeare</i> ,	<i>Private Corporations</i> ,
<i>History of Philosophy</i> ,	<i>Chemistry</i> ,
<i>Railroad Transportation</i> ,	<i>Forestry</i> .

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
 { Odyssey,
 { Greek Prose Composition,
 or German,
 or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
 { Lysias' Orations,
 { Greek Testament,
 or German, or French,
- III. TERM—Analytical Geometry, Rhetoric, I,
 Velleius and Pliny, Oratory, I.
 { Plato's Apology,
 { Greek Testament,
 or German,
 or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Political Science, I,
 Horace, Oratory, I.

ELECTIVE STUDIES:

<i>Greek History,</i>	<i>Surveying,</i>
<i>American History, a,</i>	<i>Chemistry.</i>
<i>German,</i>	

- II. TERM—English Literature, Political Science, I,
 Logic, Oratory, I.

ELECTIVE STUDIES:

<i>Demosthenes,</i>	<i>American History, b,</i>
<i>Quintilian,</i>	<i>German,</i>
<i>Roman History,</i>	<i>French.</i>

III. TERM—Elements of Law, Political Science, I.
American Constitutional Law,

ELECTIVE STUDIES:

<i>Juvenal,</i>	<i>American Literature,</i>
<i>German,</i>	<i>Argumentation,</i>
<i>French,</i>	<i>Public Address,</i>
<i>Economic History.</i>	

JUNIOR YEAR.

I. TERM—Psychology,	Blackstone, I,
Economics,	Thesis.

ELECTIVE STUDIES:

<i>Real Property, Blackstone B.II,</i>	<i>Latin, 8,</i>
<i>Constitutional Limitations,</i>	<i>Greek Tragedy,</i>
<i>English History,</i>	<i>English Literature,</i>
<i>Sociology,</i>	<i>Modern Language.</i>

II. TERM—Ethics,	Blackstone, I,
Money and Banking,	Thesis.

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Modern Language.</i>	

III. TERM—Theism,	Blackstone, I,
Private Corporations,	Thesis.

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language.</i>

II. TERM—Trigonometry, Rhetoric, I,
 Latin, Oratory, I.
German, 3, or French,

III. TERM—Analytical Geometry, Rhetoric, I,
German, 4, or French, Oratory, I.
 Latin,

SOPHOMORE YEAR.

I. TERM—Rhetoric, Astronomy, I, or
 History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

Chemistry, Greek History,
Horace, American History, a,
German, Surveying,
French.

II. TERM—English Literature, Astronomy, I, or
 History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, Logic,
French, Physiology,
Roman History, Chemistry,
American History, b, Differential Calculus,
Advanced Algebra.

III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Public Address, Elements of Law,
Argumentation, Anthropology,
Juvenal, Botany,
German, Integral Calculus,
French, Chemistry.

JUNIOR YEAR.

I. TERM { Psychology, Sanitary Science, I.
 Thesis,

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Sociology,</i>	<i>Chemistry,</i>
<i>Real Property,</i>	<i>Mechanics.</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English, 8,</i>	<i>Contracts,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English Bible,</i>	<i>Animal Histology, a,</i>
<i>History, English,</i>	<i>Human Anatomy, a,</i>
<i>Money and Banking,</i>	<i>Chemistry,</i>
<i>Municipal Government,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Physics.</i>	

III. TERM—	Theism, III,	History of Education, I,
	History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Entomology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Chemistry,</i>
<i>Constitutional Law.</i>	

SENIOR YEAR.

I. TERM {	Social Ethics, I,
	Thesis.

ELECTIVE STUDIES:

<i>Anglo-Saxon,</i>	<i>Advanced Ethics,</i>
<i>English, 4 or 9,</i>	<i>International Law,</i>
<i>German,</i>	<i>Comparative Anatomy,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Medieval History,</i>	<i>Geology,</i>
<i>Personal Property,</i>	<i>Geodetic Astronomy,</i>
<i>School Administration.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>Roman Life,</i>
<i>French,</i>	<i>Comparative Politics,</i>
<i>Chaucer,</i>	<i>Public Finance,</i>
<i>Philosophy of Mind,</i>	<i>Chemistry,</i>
<i>Modern Europe, a,</i>	<i>Economic Geology,</i>
<i>History, 11,</i>	<i>Agency,</i>
<i>Psychology of Education,</i>	<i>Advanced Composition.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

V. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

I. TERM—Algebra,	Rhetoric I,
General Chemistry,	Oratory, I.
Latin, or German, 2,	
or French,	

- II. TERM—Trigonometry, Rhetoric I,
 General Chemistry, Oratory, I.
Latin or German, 3,
 or *French,*
- III. TERM—Analytical Geometry, Rhetoric I,
 Qualitative Chemistry, Oratory, I.
Latin or German, 4, or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Drawing, I,
 Biology, Scientific German, II.
 Quantitative Chemistry,
- II. TERM—Invertebrate Zoölogy, Drawing, I,
 Physiology, Scientific German, II.

ELECTIVE STUDIES:

History, *English Literature,*
Modern Language, *Chemistry,*
Differential Calculus.

- III. TERM—Vertebrate Zoölogy, Drawing, I,
 Botany, Scientific German, II.

ELECTIVE STUDIES:

Chemistry, *Civics,*
Anthropology, *English Literature,*
Integral Calculus, *Modern Language.*

JUNIOR YEAR.

- I. TERM—Psychology, German Biology, I,
 Mechanics, Thesis.
Physiological Psychology,
Organic Chemistry,
- II. TERM—Comparative Psychology, German Biology, I,
 Physics, Thesis.

ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Organic Chemistry,</i>	<i>Human Anatomy, a.</i>

III. TERM—Entomology,	German Biology, I,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language,</i>
<i>Neurology.</i>	

SENIOR YEAR.

I. TERM—Comparative Anatomy,	{ Social Ethics, I,
Embryology,		Thesis.

ELECTIVE STUDIES:

<i>Geology,</i>	<i>Modern Language,</i>
<i>Economics,</i>	<i>Organic Chemistry,</i>
<i>History.</i>	

II. TERM—Histology,	{ Political Ethics, I,

ELECTIVE STUDIES:

<i>Human Anatomy, b,</i>	<i>History,</i>
<i>Economic Geology,</i>	<i>English Bible,</i>
<i>Money and Banking,</i>	<i>Modern Language,</i>
<i>Chemistry.</i>	

III. TERM—Neurology,	Forestry, I.
Bacteriology,	

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Literature,</i>
<i>Railroad Transportation,</i>	<i>English Bible,</i>
<i>Forestry,</i>	<i>Modern Language,</i>
<i>History.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VI. THE COURSE IN CHEMICAL ENGINEERING.

*Leading to the First Degree in Chemical Engineering.***FRESHMAN YEAR.**

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| I. TERM—Chemistry,
Higher Algebra,
<i>German, 2, or French,</i> | Rhetoric, I,
Drawing, IV. |
| II. TERM—Chemistry,
Trigonometry,
<i>German, 3, or French,</i> | Rhetoric, I,
Drawing, IV, |
| III. TERM—Chemistry,
Analytical Geometry,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | Shopwork, II. |

JUNIOR YEAR.

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|---|--|
| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | German Chemistry, I,
Chemical Thesis. |

- III. TERM—Organic Chemistry, German Chemistry, I,
 Spectrum Analysis, Chemical Thesis.
 Agricultural Chemistry, 2 or
 Boilers and Engines,

SENIOR YEAR.

- I. TERM—Physical Chemistry, { Social Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Geology,
- II. TERM—Physical Chemistry, { Political Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Direct Current Machinery, or
 Hydraulic Motors, or
 Economic Geology,
- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
 Alternating Current Machinery,
 or Water Supply and Sani-
 tary Engineering,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Drawing, Oratory, I.
 German, 2, or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Drawing, Oratory, I.
 German, 3, or French,

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| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |
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SOPHOMORE YEAR.

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|--|------------------------------|
| I. TERM—Rhetoric,
Surveying,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Descriptive Geometry,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |

JUNIOR YEAR.

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| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
{ Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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| I. TERM—Bridges and Buildings,
<i>Geodetic Astronomy or
Geology or
Advanced Mechanics or
Electrical Measurements,</i> | { Social Ethics, I,
{ Thesis. |
| II. TERM—Hydraulic Motors,
Bridges and Buildings,
<i>Economic Geology or
Advanced Physics or
Direct Current Machinery,</i> | { Political Ethics, I,
{ Thesis. |

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| III. TERM—Bridges and Buildings, | Contracts and Specifications, I. |
| { Mine Surveying, | |
| { City Surveying, | |
| <i>Railroad Transportation or</i> | |
| <i>Advanced Physics or</i> | |
| <i>Alternating Current Machinery</i> | |
| <i>or Forestry,</i> | |
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VIII. THE COURSE IN ELECTRICAL ENGINEERING.

Leading to the First Degree in Electrical Engineering.

FRESHMAN YEAR.

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| I. TERM—Higher Algebra, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 2, or French,</i> | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 3, or French,</i> | |
| III. TERM—Analytical Geometry, | Rhetoric, I, |
| Drawing, | Shopwork, IV. |
| <i>German, 4, or French,</i> | |

SOPHOMORE YEAR.

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|---------------------------------|---------------|
| I. TERM—Rhetoric, | Shopwork, IV. |
| Mechanics, | |
| Chemistry, | |
| II. TERM—Differential Calculus, | Shopwork, IV. |
| Physics, | |
| Chemistry, | |
| III. TERM—Integral Calculus, | Shopwork, II. |
| Physics, | |
| Chemistry, | |

JUNIOR YEAR.

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| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry</i> , or
<i>Theoretical Mechanics</i> , | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |
| III. TERM—Alternating Current Machinery,
Advanced Physics,
Boilers and Engines, | Machine Design
and Tools, I,
Thesis. |

SENIOR YEAR.

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| I. TERM—Design of Electrical Machinery,
Electrical Generating Stations and Transmission,
Graphical Analysis of Structures, | { Social Ethics, I,
Thesis. |
| II. TERM—Design of Electrical Machinery,
Telegraphs, Telephones,
Signaling Apparatus,
Hydraulic Motors, | { Political Ethics, I,
Thesis. |
| III. TERM—Electric Lighting,
Electric Railways,
Water Supply and Sanitary Engineering, | Contracts and Specifications, I. |

IX. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

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| I. TERM—Advanced Algebra,
Drawing,
<i>German</i> , 2, or <i>French</i> , | Rhetoric, I,
Shopwork, II. |
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II. TERM—Trigonometry,
 Drawing,
German, 3, or French,

Rhetoric, I,
 Shopwork, II.

III. TERM—Analytical Geometry,
 Drawing,
German, 4, or French,

Rhetoric, I,
 Shopwork, IV.

SOPHOMORE YEAR.

I. TERM—Rhetoric,
 Mechanics,
 Chemistry,

Shopwork, IV.

II. TERM—Differential Calculus,
 Physics,
 Chemistry,

Shopwork, IV.

III. TERM—Integral Calculus,
 Physics,
 Chemistry,

Shopwork, IV.

JUNIOR YEAR.

I. TERM—Electrical Measurements,
 Descriptive Geometry,
 Strength of Materials,

Shopwork, IV,
 Machine Design, I.

II. TERM—Direct Current Machinery,
 Thermo-Dynamics
 Metallurgy,

Shopwork, IV,
 Machine Design, I.

III. TERM—Alternating Current
 Machinery,
 Thermo-Dynamics,
 Boilers and Engines,

Shopwork, IV,
 Machine Design, I.

SENIOR YEAR.

I. TERM—Steam Engineering (49),
 Design of Electrical Ma-
 chinery,
 Bridges and Buildings,

{ Social Ethics, I,
 Thesis,
 Automobiles, IV.

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| II. TERM—Steam Engineering (50),
Design of Electrical Machinery,
Hydraulic Motors, | { Political Ethics, I,
Thesis,
Heating and
Ventilation, IV. |
| III. TERM—Steam Engineering (51),
Electric Lighting,
Water Supply and Sanitary
Engineering, | Contracts, I,
Refrigeration, IV. |

DEPARTMENTS OF INSTRUCTION

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented practically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D.,
PROFESSOR OF PSYCHOLOGY AND ETHICS.

THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY.

The studies in this department embrace Psychology, Philosophy, Ethics, Theism, and Pedagogy.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Lotze, Grundzüge der Psychologie.** Seniors and Juniors. Minor. One hour.

4. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

5. **History of Philosophy.** Lectures. Required of Juniors. Third term, two hours.

6. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

7. **Roman Philosophy** (Latin 8). Elective to Seniors and Juniors.—PROFESSOR ROCKWOOD.

8. **Philosophy. Jerusalem.** Third term, five hours.

9. **Ethics.** Required of Juniors. Second term, five hours.

10. **Social Ethics—Domestic Relations.** Lectures. Required of Seniors. First term, one hour.

11. **Political Ethics—Duties of Citizenship.** Lectures. Required of Seniors. Second term, one hour.

12. **Ethics of Plato and Aristotle.** Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

13. **Philosophy of Religion.** Required of Juniors. Third term, three hours.

EDUCATION.

14. **History of Education.** A general sketch of educational Theory and Practice in Ancient and Modern times. Lectures. Required of Juniors. Third term, one hour.—PROFESSOR EDWARDS.

15. **Psychology of Education.** Based on Colvin's "The Learning Process." Elective to Seniors and Juniors. Third term, five hours.—PROFESSOR EDWARDS.

16. **Comparative and Child Psychology.** Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

17. **Philosophy of Education.** Based on Horne's Philosophy of Education. Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR EDWARDS.

18. **School Administration.** High School organization, function and management; discussion of methods; survey of College Entrance Requirements. First term, five hours.—PROFESSOR EDWARDS.

19. **Teachers' Course in American History.** Methods of teaching History with special reference to the work of secondary schools. Second term, two hours.—PROFESSOR COLESTOCK.

20. **Teachers' Course in Greek.** The Anabasis and Iliad are used as text. The preparatory work is reviewed, and suggestions made regarding methods of teachings. Some informal lectures are

also given regarding the first year's work in Greek. First term, five hours. Seniors and Juniors.—PROFESSOR HAMBLIN.

21. Teachers' Course in Latin. Special topics in grammar, with practical exercises in Cæsar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR ROCKWOOD.

22. Teachers' Course in English. Designed to familiarize the student with the authors required for entrance to college.—PROFESSOR PERRINE.

23. Teachers' Course in Mathematics. Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools: reforms in arithmetical teaching. (b) Algebra: Its growth during the last three centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Philosophy of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

II. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT.
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND AGENCY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History* and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B. I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—JUDGE JOHNSON.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—JUDGE JOHNSON.

5. **Contracts.** Text-book, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-book, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—JUDGE MCCLURE.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** Third term, Seniors and Juniors.—PROFESSOR HAMBLIN.

13. **Constitutional Limitations.** Cooley's Constitutional Limitations and Cases.—PROFESSOR HEIM.

14. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

15. **Moot courts** are held in which an attorney-at-law and a student sit as judges, and students, deputed to represent the respective sides, present their arguments. The presiding student writes the opinion of the court.

III. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. **Corporate Finance and Commercial Law.** Organization and Management of Corporations. Corporation Finance. Form and Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups

of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. Transportation and Commerce. Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. Economics. Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. American Civics. A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. American Constitutional Law. Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.—PROFESSOR HAMBLIN.

10. Constitutional Limitations. The Constitutional Law of the American Commonwealth. The sphere of Civil Rights in relation of the exercise of governmental power through the criminal law, the police power, the taxing power, and the power of eminent domain.

11. Comparative Politics. A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

12. Municipal Government. Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

13. International Law. First term, five hours. Seniors and Juniors.

14. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

15. **Political Science.** Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

16. **American Diplomacy.** Minor Course, two hours.

IV. DEPARTMENT OF SOCIOLOGY AND LOGIC.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. **Anthropology, Descriptive and Physical.** Elective to Sophomores. Third term, five hours.

2. **Sociology, Principles and Theory.** Elective to Seniors and Juniors. First term, five hours.

3. **Charities and Reform.** Seniors and Juniors. Second term, one hour. Prerequisite, Course 2.

4. **Municipal Sociology.** Seniors and Juniors. Second term, five hours.

5. **History of Art.** Lectures. Sophomores. Three terms, one hour. I. Painting; II. Sculpture; III. Architecture.

6. **Logic, Deductive and Inductive.** Second term, five hours.

7. **Scientific Method, with Exercises in Analysis.** Seniors and Juniors. Second term, five hours.

V. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. **Oriental History.** A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. **Hebrew History and Literature.** Second term, five hours.
—PROFESSOR PHILLIPS.

3. **New Testament History and Literature.** Third term, five hours.—PROFESSOR PHILLIPS.

4. **Greek Political and Constitutional History.** First term, five hours.—PROFESSOR HAMBLIN.

5. **Roman History.** Second term, five hours.—PROFESSOR ROCKWOOD.

6. **Roman Private Life.** Second term, five hours.—PROFESSOR BALLENTINE.

7. **Medieval Europe.** General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.

8. **Modern Europe to 1789.** From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.

9. **Modern Europe since 1879.** The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.

10. **History of England, a.** Political and industrial development of the English people from the earliest times. Second term, five hours.

11. **Constitutional History of England, b.** With special reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.

12. **American Colonial History, a.** European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.

13. **American Constitutional History, b.** Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.

14. **Industrial History of United States.** Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. **Teachers' Course in American History.** General survey of

American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VI. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

There are four terms of required work in Greek in the Classical Course, and five in the Greek Philosophical Course; while Greek may be taken as an elective during the entire Junior and Senior years. Besides the Elective Courses a number of Minor Courses are offered. In the Elective Courses a year of poetry alternates with a year of prose. A course of New Testament Greek, designed especially for candidates for the ministry and extending through the Senior year, is given by Professor Phillips.

1. **Homer.** Odyssey, Books 5-8. Review of verb forms and syntax of verbs. Epic forms and styles. Word lists. Metre. First term, Freshman year.

2. **Lysias.** Six orations. Inflection and syntax of nouns. Prose composition. Attic oratory. Translation at sight and hearing. Second term, Freshman year.

3. **Plato.** Apology and selections. Special topics in Greek Syntax. Philosophy and influence of Socrates. The Sophists. Extracts from the Memorabilia at sight. Third term, Freshman year.

4. **Greek Political and Constitutional History.** Bury's History of Greece is used as a text-book. The class is also required to do collateral reading on important epochs. First term, Sophomore year.

5. **Demosthenes.** Olynthiacs and Philippics. History and Politics of the Macedonian period. Style of Demosthenes. Second term, Sophomore year.

6. **Æschylus and Sophocles.** Prometheus Bound and Œdipus Tyrannus. The drama, theatre, and metres. First term in alternate years.

7. **Euripides and Aristophanes.** *Medea* and *The Clouds*. Greek Comedy. Religious influence of the poets. Influence of the Classical on the Modern Drama. Second term in alternate years.

8. **Greek Literature in English.** A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

9. **Demosthenes.** *De Corona*. The oratory of Demosthenes, from a literary and political point of view. *Æschines* against *Ctesiphon* at sight. Second term, Seniors and Juniors; alternating with 6.

10. **Plato.** *The Phædo*. Greek Philosophy. The influence of Plato. Third term, Seniors and Juniors; alternating with 7.

11. **New Testament Greek.** The Gospel according to Luke. Hellenistic Greek. Second and third terms, Freshman year; one hour a week.

12-14. **New Testament Greek.** Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Three terms. Elective to Seniors.—PROFESSOR PHILLIPS.

15. **Teachers' Course in Greek.** The *Anabasis* and *Iliad* are used as text-books. Thus the Preparatory work may be reviewed, and suggestions received regarding the methods of teaching. Some informal lectures are also given regarding the first year's work in Greek. First term, Seniors and Juniors.

16. **Xenophon.** The *Symposium* and *Œconomicus*. Sophomores and Freshmen. Winter terms in alternate years, one hour.

17. **Homer and Lucian.** Selections from each in alternate years. Sophomores and Freshmen. Third term, one hour.

18. **Xenophon and Æschines.** The *Memorabilia* and the oration against *Ctesiphon*, in alternate years. Seniors and Juniors, first term, one hour.

19. **Sophocles and the Lyric Poets.** *Antigone* and selections from the Lyric Poets in alternate years. Seniors and Juniors, second term, one hour.

VII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

FLOYD GEORGE BALLENTINE, PH.D., ASSISTANT PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (*selected speeches*) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. **Cicero.** *De Senectute*. Livy, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. **Livy.** Books XXI, and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. **Velleius.** Roman History. Pliny. Selections from the Epistles. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. **Horace.** Selections from the Odes, Satires, and Epistles. Prosody; Historical Outlines of the Latin Language and Literature; Wilkins' Primer; Lectures. First term, Sophomore year, two divisions.

5. **Roman History.** The work is based on Meyer's Rise and Fall of Rome. Mommsen, Bury and Gibbon are used for supplementary reading. Second term, Sophomore year.

6. **Quintilian.** Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. **Juvenal.** Selected Satires. Third term; open to those who have taken Course 4.

8. **Roman Philosophy.** Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. **Plautus and Terence.** Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term; open to Seniors and Juniors; alternating with 14.

10. **Latin Inscriptions.** Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus.** Annals. Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Cæsar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.

17. **Classical Philology.** Introductory Course, one hour.

VIII. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature.** Introductory Course. Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, second term, Sophomore.

2. **English Literature** from 1832. For those who have taken Course 1, and alternating with Course 13.

3. **English Literature, 1790-1832:** Wordsworth, Coleridge,

Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.

4. **English Literature, 1714-1790.** For those who have taken Course 1, and alternating with Course 15.

5. **English Literature, 1600-1660.** For those who have taken Course 1 and alternating with Course 8.

6. **Shakspere.** Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.

7. **Shakspere.** His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.

8. **The English Drama.** Its development from the earliest times to Shakspere. For those who have taken Course 1, and alternating with Course 5.

9. **Teachers' Course in English.** Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to college. For those who have taken Course 1, and alternating with Course 10.

10. **Principles of Literary Criticism.** For Seniors and Juniors, alternating with Course 9.

11. **American Literature,** with special reference to the national period. For those who have taken Course 1; alternating with Course 12.

12. **Journalism,** a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For those who have taken Course 1.

13. **Anglo-Saxon.** Old English Language and Literature, with special elective in *Beowulf*. For those who have taken Course 1 and the required work in German.

14. **Chaucer.** Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's *The English Language*. For those who have taken Course 1 and the required work in French.

15. **Modern English.** Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.

16. **Foreign Literature in English.** Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course, lectures are given on Modern English Fiction.

17. **Periods of English Literature.** Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. *Le Public et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut.* Minor.

19. **Shakspere.** Fünf Vorlesungen von Bernhard ten Brink. Minor.

IX. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

BROMLEY SMITH, A.M., INSTRUCTOR IN RHETORIC AND ORATORY.

CHARLES CARPENTER FRIES, A.M., INSTRUCTOR IN RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. **Rhetoric and English Composition.** Introductory Course. Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen.

Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. **English Composition.** Daily themes, recitations, and consultations. First term, five hours. Required of Sophomores.

3. **Argumentation.** Baker's *Principles of Argumentation*. Briefs, forensics and oral discussion. Third term. Open to students who have passed in 1 and 2.

4. **English Composition.** *Advanced Course.* Wendell's *English Composition*. Daily and fortnightly themes, recitations, and consultations. Second term; five hours. Open to Seniors and Juniors.

5. **Theses.** Every member of the Junior and the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement orations. The

subjects of the theses are presented to the Professor of Rhetoric before October 22 and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in Structure. Two hours.

7. **English Prose.** Studies in the Principles of Style. Two hours.

8. **Teachers' Course.** The theory and practice of Rhetoric and Composition. Carpenter, Baker, and Scott. The teaching of English. Five hours. Open to students who have attained an average grade of nine in Courses 1, 2, and 4.

9. **The Theory of Rhetoric.** A study of the laws of thought.

10. **Movements of Thought in the Nineteenth Century.** Methods of investigation; theses. Open to Seniors.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory, aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. **Public Speaking.** Delivery of complete orations illustrating and applying the principles studied in the first and second terms.

A prize is offered to the young man and one to the young woman of the Freshman Class who excel in the delivery of these orations. Required, third term.

SOPHOMORES.

4. **Public Speaking.** Close analysis and study of the details of public speaking; study of the various styles of delivery and of the different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. **Public Speaking.** Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second term, one hour.

6. **Public Speaking.** Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. **Public Address.** The various forms of addressing the public are studied. Beginning with open letters and editorials, the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens from the above forms. Third term, five hours; Sophomores.

8. **Practical Oratory.** Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. **Interpretative Reading.** The use of the voice in bringing out the meaning of the best literature is obtained by practice in

class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors. (Counts as Minor.)

JUNIORS.

10. Prize Contest. A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in composition and elocution as shown during the preceding terms of the college Course.

11. Prize and Honor Debate. During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. Oral Debates. Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. Honors in Debating. During the year an elective course in debating is offered to Seniors. The last debate is public.

14. Prize in Oratory. A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

X. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

LEO LAWRENCE ROCKWELL, A.M.,
INSTRUCTOR IN GERMAN.

A.—GERMAN.

1. Elementary Course. Grammar; German Prose; practice in writing German. Three terms.

2. German Prose. Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. **German Prose and Poetry.** Grammar; practice in writing German. Elective Course for those who have taken course 2.
4. **Historical German Prose.** Practice in writing German. Elective Course for those who have taken Course 3.
5. **Modern German Novelists.** Practice in writing German. Elective Course for those who have taken course 4.
6. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken course 4.
7. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken course 4.
8. **Goethe.** Practice in writing German; lectures. Elective Course for those who have taken courses 5-7.
9. **Goethe.** Shorter Poems, *Dichtung und Wahrheit*, *Faust I*; lectures. Elective Course for those who have taken course 8.
10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken course 9.
11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with course 8.
12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with course 9.
13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with course 10.
14. **Lotze.** *Grundzüge der Psychologie.* (Philosophy 3.)
15. **German Biological Science.** (Biology 21.)
16. **German Chemical Science.** (Chemistry 16.)
17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B.—FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.
2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken course 6.

8. **Authors of the XVIII Century.** Practice in writing French. lectures. Elective Course for those who have taken course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective course for those who have taken course 8.

C.—SPANISH.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. Elective course, for Seniors and Juniors. First term, five hours.

2 and 3. **Spanish Prose.** Translation, Composition, Conversation. Elective course for Seniors and Juniors. Second and third term, five hours.

D.—ITALIAN.

Special instruction for engineering students in Italian Grammar and Conversation.

XI. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNÆUS DRUM, SC.M.,
ASSISTANT PROFESSOR OF MATHEMATICS AND SURVEYING.

ROBERT JOHN CRANE,
ASSISTANT IN SURVEYING.

FRED OSCAR SCHNURE,
FRED FELTON MELLOTT,
ASSISTANTS IN DRAWING.

ALBERT JOHN CLARKE,
ROLAND KEILHOLTZ HOKE,
THOMAS LEWIS JAMES,
ASSISTANTS IN SHOPWORK.

JAMES RALPH IRWIN,
ASSISTANT IN PHYSICS.

1. **Solid Geometry.** The course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differentiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. **Trigonometry.** The course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. **Analytical Geometry.** The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The course is intended to give a clear conception of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. **Higher Analytical Geometry.** The course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior year, first term, five hours.

7. **Differential Calculus.** The course includes higher derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

8. **Integral Calculus.** The course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and application to problems in Physics and Mechanics. Sophomore year, third term, five hours.

9. **Differential Equations.** A course with mechanical applications. Senior year, first term, five hours.

10. **Descriptive Astronomy.** The aim of the course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science Courses, first and second terms, one hour.

11. **General Astronomy.** The subject is taught by text-book, with illustrations in the observatory. The students have free use of the ten-inch equatorial telescope. Third term, five hours.

12. **Geodetic Astronomy.** The course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic determination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites, a course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

13. **Plane and Topographical Surveying.** Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text.

Lectures, tests. Field practice in each position on corps using transit, Y, dumpy and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

14. Geodetic Surveying. Minor course. Sophomore Civil Engineering, one hour throughout the year.

15. Railroad Surveying. Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary surveying for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixed grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

16. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

17. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

18. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids, and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses, Sophomore year, second term, five hours, and Junior year, first term, five hours.

19-21. Courses in Drawing. Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

22. Architectural Design. The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

23-25. General Physics. (Three terms.) These courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) **Electricity and Magnetism.** Second term.

(3) **Acoustics and Optics.** Third term.

26-29. Advanced Physics. The course extends throughout the year and assumes that the student has completed courses 23-25 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Laboratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the

basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

26. Electrical Measurements. In this course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

27. Heat. A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous-flow calorimeter and the Rowland apparatus.

28. Light. The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly and Lummer-Brodhun screens.

29. Spectrum Analysis. Recitation one hour, Laboratory eight hours per week.

Comparison, observation and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and minerals; spark and arc spectra of solids; sparks and flame spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva Society, prisms of all types by the best foreign makers, absorption cells, etc.

30. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

31. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

32-34. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

35. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

36. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurement of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

37. Water Supply and Sanitary Engineering. Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of streams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

38. Contracts. In this course are given the principles of Com-

mon Law as applied to contracts. Third term, Senior Engineering, one hour.

39. Theoretical Mechanics. Differential and integral calculus are required for admission to this course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of machinery, work, energy, friction, and impact. Juniors, first term, five hours.

40. Direct Current Machinery. This course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurements of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

41. Alternating Current Generators, Transformers and Motors. Electromotive force and current curves are traced, and their modifications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation and general performance of alternating current apparatus are studied in detail. This course must be preceded by the course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

42. Design of Electrical Machinery. During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lectures, computing exercises, drawing and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

42. Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries. Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of secondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

44. Telegraph, Telephone, Railway Signal and Related Ap-

paratus. Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, Electrical Engineering, second term, five hours.

45. Electric Lighting, Construction, Wiring and Economics. The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

46. Electric Railways, Construction, Operation and Economics. This course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

47. Machine Design, Machine Tools. Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

48. Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors. This is a general course dealing with the thermodynamics of the heat engine, the theoretical, indicated and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proximate and ultimate analyses. A large number of problems relating to steam engines, boilers and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, Engineering all Courses, third term, five hours.

49, 50, 51. Steam Engineering. Senior year, Mechanical Engineering, five hours, through the year.

49. Steam Engines and Turbines. In this course the different types of steam engines and turbines are carefully studied, going more into detail than in Course 48, special attention being given to the

moving parts such as valves, valve-gears, etc. Also the various economizing appliances and their effect upon the cost of producing power are taken up. The class-room work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

50. Boilers. A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

51. Steam Engine Design. This course follows very closely Course 49, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the class-room each student is required to design and draw the parts for a steam engine of given size. Third term.

52-54. Shopwork. In Mechanical Engineering, shopwork is required of students throughout the four years of the course. In Civil, Electrical and Chemical Engineering, it is required throughout the Sophomore year. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four courses are given, each extending through a year.

52. Wood-working. The course in wood-working consists of carpentry, cabinet work and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

52. Pattern-making and Moulding. A general course covering pattern-making, simple moulding and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes and electric motors are made and assembled during the course. Sophomore year, all Engineering Courses, four hours.

54. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history and design being discussed. Each student is required to design the parts, make the patterns and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

55. Steam Engine. The work in this course is similar to that in course 53, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

56. Internal Combustion Engines. A lecture course supplemented by reading and problems. It starts with the general theory of the internal combustion engine, expanding into a detailed study of the actual machine as manufactured and used. Special attention is given to the different types of engines, methods of introducing the working fluid and the various systems of ignition, the automobile engine receiving a major portion of the time. Senior year, fall term, four hours.

57. Heating and Ventilation. In this course a general study of the various systems of heating buildings is taken up. Attention is given to the comparative merits, under differing circumstances, of the different systems, such as hot air, steam, hot water; direct and indirect heating; ventilation by fan and by natural air currents, special emphasis being given to installing details such as piping systems, location of drips, air valves, etc., together with computation of costs and efficiencies. The lectures are accompanied with problems and experiments. Senior year, winter term, four hours.

58. Refrigeration. This course consists of a series of lectures accompanied by illustrative problems bearing upon the various principles and systems of refrigeration. A study is made of the properties and action of ammonia as applied to refrigeration plants. The ice plant is studied in detail and cold storage construction is considered. The subject is taken up from the point of view both of operation and economics. Senior year, Mechanical Engineering, four hours.

XII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

EARLE BUDD ARMSTRONG, ASSISTANT.

The courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigation and to train the student in the various methods of chemical research. The courses as a whole are offered to those who expect to teach chemistry or enter the testing or industrial laboratory. As chemistry is at the

foundation of the natural sciences, the first courses are essential to the study of science and medicine, and are important for general culture.

1. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, class-room, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, courses 1 and 2.

4, 5, 6. Quantitative Analysis. This course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy and water are studied.

(3) In the third term, Fire, Gas and Electro-chemical methods are practiced.

7, 8, 9. Organic Chemistry. Prerequisites, courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Carius' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later; polycyclic and heterocyclic compounds; terpens and camphors are taken up. In the laboratory, preparations of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) **Organic Preparations.** Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) **Organic Preparations.** A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas law, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermodynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) Third term. Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity, migration of ion, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. **Chemical Preparations.** Prerequisites, Courses 1, 2, and 3. Laboratory course; ten hours per week.

(1) First term. Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) Second term. Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Relations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. **Industrial Chemistry.** A series of lectures and recitations upon the most important technical chemical operations exclusive of

metallurgy. A study of the application of chemical principles, technical processes, and the mechanical methods of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, courses 1, 2, and 3.

17. Metallurgy. The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, courses 1, 2, and 3.

18. Agricultural Chemistry. The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, courses 1, 2, and 3.

19. German Chemical Literature. One hour a week, throughout the year. Prerequisites, at least two terms of German, and courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are read, and study is made of the derivation and formation of scientific words.

20. Physical Chemistry. Mathematical topics.

21. Organic Research.

22. History of Chemistry.

XIII. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR OF BIOLOGY.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

H. WALTER BAKER,
JOHN WINTER RICE,
ASSISTANTS IN BIOLOGY.

It is the constant aim in this department to teach how to interpret nature. The student is guided in his investigations by lectures and laboratory manuals.

1. Animal Physiology. The aim of this course is to acquaint

the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The Course is intended for those who wish a general knowledge of Physiology.

2. Physiological and Experimental Psychology. Elective to Seniors and Juniors.

3. Comparative and Child Psychology. Text-book, reports Elective to Seniors and Juniors.

4. Sanitary Science. Lectures, one hour a week through the year.

5. Human Osteology and Comparative Anatomy. Recitations and dissections. In this course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. Human Anatomy. Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second Course, similar to 6a.

7. Normal Histology (a). Recitations and lectures, and laboratory work. In this course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining and sectioning.

8. Normal Histology (b). A continuation of course 7.

9. Embryology. Recitations, lectures, and laboratory work. This Course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds and mammals.

10. Biology. Recitations and dissections. The aim of this course is to meet the needs of general education on this subject, and at the same time makes clear the fundamental principles, scope, method, history, and subdivisions of Biology and its relations to other sciences.

11. Invertebrate Zoölogy. Recitations and dissections. This course succeeds the Course in Biology. It takes up the study and dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. **Vertebrate Zoölogy.** Recitations and dissections. This is a continuation of course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. **Philosophy of Zoölogy.** Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. **Entomology.** Recitations and laboratory work. In this course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. **Heredity.** Minor course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. **Phænogamic Botany.** Recitations, lectures, and field work. This is a general Course including the anatomy of the representative types and their relation to the environment; a study is made of the local flora.

17. **Cryptogamic Botany.** Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. **Elements of Forestry.** A course covering the factors that control and regulate the development of our forests.

19. **Bacteriology.** Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

20. **Mineralogy and Geology.** Recitations, lectures, and laboratory work. A general course intended to give the leading facts and principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

21. **Economic Geology.** Recitations, lectures, and laboratory work.

22. **German Biological Literature.** Junior year, one hour throughout the year.

MEDICAL PREPARATORY DEPARTMENT.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on the work in the Organic Sciences. A large room has been fitted up especially for Microscope work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of references, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeleton, a life-sized French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia Medica. Parts of these collections are kept in the laboratories and used in class-room work.

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystallized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian relics. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library ninety feet long has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A Course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

LEWIS A. EYSTER AND OLIVE MANSFIELD COOPER, ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections

of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in classroom work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

The Carnegie building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University under seal that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average standing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below

8.5; or if in his Senior year it is below 9. The passing grade for graduate students is 9. No one will be recommended for graduation in the Courses of Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon his studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire Course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire Course are graduated *summa cum laude*; students who attain an average of 9.2 or more are graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall, which all the students of the College are required to attend.

Attendance upon public worship in some church in town on Sunday morning is required. Students are required to attend the religious services held on Thanksgiving Day.

On the Day of Prayer for Colleges, a sermon is preached by the President, or by some one at his request. All the students are required to attend.

GOVERNMENT.

It is assumed that all who enter the Courses of study in the College do so for the purpose of acquiring an education, not only of the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The College does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in his office College women who may desire advice or assistance from him.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting, missionary

and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

Euepia; Theta Alpha. These are the two Literary Societies of the College for men. They hold meetings for Orations, Essays, and Debates. Each Society has a convenient hall, and by an arrangement of the Faculty will always have a nearly equal number of members.

The Zeta Literary Society is composed of young women admitted to any of the Courses in the College.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknell Mirror*. This periodical appears monthly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

Another association of students publishes, weekly, during the school year, the *Orange and Blue*.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or class-room work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. Young women have opportunity for physical training in the Calisthenium of the Women's College. These are now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics, and who shall have received his preparatory training at Bucknell Academy.

The prize for 1913 was awarded to Edgar Carlton Campbell.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1913 was awarded to Joseph Earl Malin.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1913 was awarded to Edward Oliver Clark.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation are open for competition to the Sophomore and Freshman Classes. The prize for the Freshman Class was awarded, in 1913, to Olive Mellicent Park.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1913 to Edward John Richards.

The corresponding prize for women was awarded in 1913 to Edna Alice Whittam.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1913 to Edward John Richards, first, and Frank Russell Hamblin, second.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their Course in College shall have been without exception."

The first prize was awarded in 1913 to Bright Wilkes Beck and the second to Perry Aquila Caris.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A.M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their Course in College shall have been without exception."

The prize for excellence in Greek was awarded in 1913 to Richard Hansber Bowling; the prize for excellence in Latin was awarded in 1913 to Harry Xing Kelly.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A.M., Chaplain in the United States Navy, and a graduate from the Theological Department of

this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1913 to Richard Hansber Bowling.

THE ANNA MOORE HARE PRIZE.

In memory of his daughter, Anna Moore Hare, the Reverend Calvin Aurand Hare, A.M., has established an annual prize in Logic, to be awarded to that student at graduation who shall have done the best work in Logic, regard being had both to the amount and the quality of the work.

The prize was awarded in 1913 to Leslie Wellington Stout.

SCHOLARSHIPS.

I. BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A. M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A.B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIP.

The William V. Wilson Scholarship was established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnæ Club, is available for a woman student from Philadelphia.

X. THE MEDICO-CHIRURGICAL SCHOLARSHIP.

The Medico-Chirurgical Medical College of Philadelphia offers a scholarship covering tuition in that college to the student from Bucknell University who evinces the best preparation and aptitude for medical work.

XI. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy members of the graduating class.

XII. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

EXTRA STUDIES.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take special work in any department of the College under the direction of the Professor of that department.

2. Such work must be assigned by the Professor, and the method of study described by him.

3. If the student shall attain an aggregate average of 9 in all the studies of the current term, and pass a satisfactory examination in the voluntary study, the work shall be credited to him.

4. Only one such study may be pursued by any one student during any one term. A student may also take two such minor studies or one such major study in the Summer vacation.

5. The Professor with whom the student is working shall have the privilege of requiring a partial examination on the work done at any time during the term, and there may be regular recitations at the Professor's option.

6. The amount and quality of minor work shall be taken into account in awarding honors at graduation, but is not counted toward any degree.

EXPENSES.

The College charges amount to \$150 per annum, for those who room in the College buildings, and \$140 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as Tuition. Tuition is rated at \$50 per annum, and is included in the College charges. Students in the Course in Civil, Electrical or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged the same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$10 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damages to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board in the Academy.

Young women in the Collegiate Department room and board in the Women's College. The standard annual charge for board, tuition, furnished room, heating, lighting, is \$325. An extra charge for choice rooms in the Bucknell Cottage and in New Cottage, ranging from \$5 to \$10 per term, is made.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$5 per term is charged for gas, water, and general chemicals for each course, except courses 1 and 2, for which the charge is \$2.50. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men students can board in clubs at a cost of from \$2.50 to \$3.00 per week. Boarding can be obtained in private families at \$4.00 or \$5.00 per week, or at the table of the Bucknell Academy at \$4.00 per week. No self-boarding is allowed in the College buildings.

SIXTY-THIRD ANNUAL COMMENCEMENT.

WEDNESDAY, JUNE 18, 1913.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

BRIGHT WILKES BECK,	ALEXIS WOOLMAN KEEN,
RICHARD HANSBER BOWLING, JR.,	JOSEPH LESLIE McKEAGUE,
PERRY AQUILA CARIS,	EARL MORGAN RICHARDS,
MARIAN FISCHLER,	HAROLD AUGUSTUS SHAFFER,
HOWARD MARSHALL GOEHRING,	LESLIE WELLINGTON STOUT,
LOGAN EARL JACKSON,	BOYD HENRY WALTER.

ORATIONS MAGNA CUM LAUDE.

HUGH MAX BULLARD,	CLAYTON ELMER PHILLIPS,
WALTER HERBERT EDWARDS,	GEORGE THURMAN PIERSOL,
JOHN DIETRICH WITTICH FETTER,	HARTLEY CARR POWELL,
CHARLES ADAM FRYLING,	ALBERT NORMAN REDELIN,
FRANKLIN OSCAR GORSUCH,	ROBERT LEVI ROOKE,
JAMES BOWEN GRIFFITH,	CHARLES LOY SANDERS,
CAREY WATROUS HARDING,	CLAY SHOEMAKER SANDERS,
BENJAMIN SOLOMON HARRIS,	JOSEPH PARDOE SHEARER,
HARRY XING KELLY,	AMOS MILES STETLER,
MARY FLORENCE MITCHELL,	PAUL RAYMOND WENDT,
CHARLES AUGUSTUS NYBERG,	HERMAN EMERSON ZEHNER.

ORATIONS CUM LAUDE.

JOLETTA MAY ARTHUR,	HAZEL ETTA GALLOWAY,
HELEN KING BARTOL,	MARWOOD BENJAMIN GLOVER,
JOHN RALPH BOGERT,	CARLTON BALLARD HOOKER,
JOHN WESLEY BRESSLER,	GEORGE MIDDLETON,
MARY MARGARET BROWN,	GEORGE WILLIAM POTTS,
HELEN WATSON DAVIS,	HENRY GRIGGS WESTON SMITH,
DAVID FORREST DUNKLE,	HENRY SMITH STEELE,
FAYETTE CLINTON ESHELMAN,	RALPH AMOS STILL.

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 18, 1913.

A. DEGREES IN ARTS.

I. MASTER OF ARTS.

PAUL JAMES ABRAHAM,	DANIEL EDGAR HOTTENSTEIN,
MARC LUTHER BALDWIN,	EMMA ELIZABETH KEISER,
CONRAD LESLIE BASKINS,	WILLIAM LEISER, 3D,
ELBINA LIVINIA BENDER,	ONESIMUS GEORGE LANGFORD,
JOHN WARD BROWN,	ROBERT BLISS MACKEY,
EMMA LOUISE BUSH,	LEROY MACFARLAND,
ALEXANDER CLEVELAND CONNER,	SALLIE SIDES McSPARRAN,
HARRY SHEIDY EVERETT,	WILLIAM JOSEPH SCHULTZ,
CHARLES FIRTH,	JAMES WESLEY SHIPE,
FRANK HERMAN FRITZ,	JOSEPH RIEGEL SHULTZ,
JOSEPH WELLS HENDERSON,	ALBERT KNORR STOCKEBRAND.

II. BACHELOR OF ARTS.

JOLETTA MAY ARTHUR,	BENJAMIN SOLOMON HARRIS,
HELEN KING BARTOL,	(Jurisprudence),
HENRY HARMON BLISS, JR.,	LOGAN EARLE JACKSON,
RICHARD HANSBER BOWLING, JR.,	HARRY XING KELLY,
MARY MARGARET BROWN,	MINNIE ETHEL MAYNARD,
EDWIN CHARLES BRUSH,	GEORGE MIDDLETON,
PERRY AQUILA CARIS,	MARY FLORENCE MITCHELL,
HELEN WATSON DAVIS,	CHARLES AUGUSTUS NYBERG,
MILES ELTON DEAN,	GEORGE WILLIAM POTTS,
DAVID FOREST DUNKLE,	(Jurisprudence),
(Jurisprudence),	LEONARD ANTHONY RICHARDSON,
JOHN DIETRICH WITTICH FETTER,	CHARLES LOY SANDERS,
MARIAN FISCHLER,	CLAY SHOEMAKER SANDERS,
CHARLES ADAM FRYLING,	HAROLD AUGUSTUS SHAFFER,
(Jurisprudence),	HENRY GRIGGS WESTON SMITH,
HAZEL ETTA GALLOWAY,	RALPH AMOS STILL,
JAMES BOWEN GRIFFITH,	LESLIE WELLINGTON STOUT,
(Jurisprudence),	(Jurisprudence),
GEORGE FREEMAN HAINES,	BOYD HENRY WALTER,
CAREY WATROUS HARDING,	SAMUEL KNOX WHITE.
(Jurisprudence),	

III. BACHELOR OF PHILOSOPHY.

BRIGHT WILKES BECK,	MARY JANE IREY,
ORVILLE VAN WICKLE HAWKINS,	ANTHONY JAY MURRAY,
ETHEL MARGARET HOTTENSTEIN,	GRACE ROSSITER,
SAMUEL PAUL TEAMER.	

B. DEGREES IN SCIENCE.

I. THE SECOND DEGREE IN GENERAL SCIENCE.

JOSEPH LESLIE MCKEAGUE,	GEORGE FRANCIS REITER.
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II. THE FIRST DEGREE IN GENERAL SCIENCE.

CHARLES BAKER BERNHART,	ALBERT AUGUSTUS JORDAN,
MARWOOD BENJAMIN GLOVER,	GEORGE EDWARD O'BRIEN,
HOWARD VOELKER FISHER,	MARY DELINDA POTTER,
FRANKLIN OSCAR GORSUCH,	JOSEPH PARDOE SHEARER,
MAX GROSSMAN,	EDWARD WETHERELL SMITH,
RUTH TUSTIN HEINSLING,	RALPH LEE TALBOT,
WILLIAM CURRIE HULLEY, JR.,	PAUL RAYMOND WENDT.

III. THE FIRST DEGREE IN BIOLOGY.

HUGH MAX BULLARD,	FAYETTE CLINTON ESHELMAN,
ALBERT NORMAN REDELIN.	

IV. THE FIRST DEGREE IN CHEMICAL ENGINEERING.

ALEXIS WOOLMAN KEEN,	HARTLEY CARR POWELL,
JOSEPH LESLIE MCKEAGUE,	HERMAN EMERSON ZEHNER.

V. THE FIRST DEGREE IN CIVIL ENGINEERING.

JOHN RALPH BOGERT,	HOWARD MARSHALL GOEHRING,
WALTER HERBERT EDWARDS,	GEORGE THURMAN PIERSOL.

VI. THE FIRST DEGREE IN ELECTRICAL ENGINEERING.

JOHN WESLEY BRESSLER,	EARL MORGAN RICHARDS,
CARLTON BALLARD HOOKER,	ROBERT LEVI ROOKE,
CLAYTON EARLE PHILLIPS,	HENRY SMITH STEELE,
AARON MILES STETLER.	

COMMENCEMENT ADDRESSES.

Baccalaureate Sermon.....	THE PRESIDENT
Sermon, Education Society.....	HENRY J. WHALEN, PH.D.
Address before the Alumni Association.....	DANIEL E. LEWIS, A.M.
Poem before the Alumni Association.....	JACOB G. WALKER, D.D.
Annual Address.....	CHARLES L. WILLIAMS, L.H.D.
Commencement Address.....	THE PRESIDENT

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Secretary, ELKANAH B. HULLEY, SC.B., Pittsburgh.

The Alumni Club of Chicago.

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Secretary, JOSEPH C. HAZEN, PH.B., Chicago.

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Secretary, JOHN S. WHIGHTNOUR, D.D., Scranton.

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Secretary, LEVI LORE RIGGIN, M.D., Oakland.

The Alumni Club of China.

President, CHARLES WAY HARVEY, Shanghai.

Secretary, REV. LEWIS C. HYLBERT, Ningpo.

NAMES OF STUDENTS.

GRADUATE STUDENTS.

NAME.	MAJOR SUBJECT.	RESIDENCE.
CHARLES H. BALDWIN, SC.B.,	<i>Entomology.</i>	Indianapolis, Ind.
JOHN CHARLES BANK, E.E.,	<i>Electrical Engineering.</i>	Newark, N. J.
IRVIN ALBERT BARTHOLOMEW, SC.B.,	<i>Civil Engineering.</i>	Nissa, Oregon
HELEN KING BARTOL, A.B.,	<i>Modern Language.</i>	Lewisburg
HENRY HARMAN BLISS, A.B.,	<i>Engineering.</i>	Washington, D. C.
MINNIE ELIZABETH BROBST, A.B.,	<i>Latin.</i>	Sunbury
CATHERINE DILL BROWN, SC.B.,	<i>Mathematics.</i>	Philadelphia
ANSLEY BAILEY CLAYPOOLE, A.B.,	<i>Philosophy.</i>	Charles City, Iowa
CLYDE WILLIAM CRANMER, PH.B.,	<i>Biology.</i>	Franklin
NELSON KENNEDY CROSSMAN, A.B.,	<i>Philosophy.</i>	White Valley
DAVID FORREST DUNKLE, A.B.,	<i>Jurisprudence.</i>	DeLand, Fla.
ISAAC NEWTON EARLE, JR., A.B.,	<i>Greek.</i>	New Orleans, La.
HOWARD V. FISHER, SC.B.,	<i>Jurisprudence.</i>	DeLand, Fla.
MARWOOD BENJAMIN GLOVER, SC.B.,	<i>Jurisprudence.</i>	Collingdale
WILLIAM ALFRED GOEHRING, SC.B.,	<i>Science.</i>	Lewisburg
HOWARD E. GRESS, SC.B.,	<i>Philosophy.</i>	Monessen

NAME.	MAJOR SUBJECT.	RESIDENCE.
CLARA ELEANOR HARMAN, A.B.,	<i>Literature.</i>	Montoursville
COLEMAN JOHN HARRIS, A.B.,	<i>Science.</i>	Factoryville
EARL EDWARD HINMAN, SC.B.,	<i>Science.</i>	Narberth
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Montclair, N. J.
JOHN ELIJAH KAUFFMAN, A.B.,	<i>Philosophy.</i>	Lewisburg
HARRY XING KELLY, A.B.,	<i>Language.</i>	Factoryville
MINOR RAYMOND KENDALL, PH.B.,	<i>Philosophy.</i>	Cleveland, Ohio
HERBERT SPENCER LLOYD, PH.B.,	<i>History.</i>	Kingston
ROY ALLEN LONG, PH.B.,	<i>Jurisprudence.</i>	Philadelphia
WILLIAM McCULLEN, C.E.,	<i>Engineering.</i>	Philadelphia
SARA ELLA MEYER, PH.B.,	<i>History.</i>	Lewistown
ROBERT BRUCE MORRIS, PH.B.,	<i>Philosophy.</i>	Philadelphia
ANNA ELIZABETH NOAKER, SC.B.,	<i>Mathematics.</i>	Spring Valley, Ill.
HELENA MAE OLDS, PH.B.,	<i>German.</i>	Manasquan, N. J.
FRANK HALFPENNY PAINTER, PH.B.,	<i>History.</i>	Jersey Shore
WEAVER WEDDELL PANGBUEN, A.B.,	<i>History.</i>	Cambridge, Mass.
WILLIAM WALLACE PORTSER, C.E.,	<i>Engineering.</i>	Clayton, Del.
GEORGE WILLIAM POTTS, A.B.,	<i>Jurisprudence.</i>	Pittsburgh
WILLIAM WESLEY RAKER, SC.B.,	<i>Economics.</i>	Muncy
FRED VALENTINE ROCKEY, A.B.,	<i>History.</i>	Liverpool
STANLEY HERBERT ROLFE, A.B.,	<i>History.</i>	Nanticoke

NAME.	MAJOR SUBJECT.	RESIDENCE.
ANDREW EDGAR SABLE, SC.B.,	<i>Mathematics.</i>	Baltimore, Md.
HAROLD AUGUSTUS SHAFFER, A.B.,	<i>Engineering.</i>	Lewisburg
JOSEPH PARDOE SHEARER, SC.B.,	<i>Biology.</i>	Milton
CLARA SENORA SHELLHAMMER, SC.B.,	<i>Biology.</i>	New Ringgold
JAMES HARRY SHOEMAKER, SC.B.,	<i>Literature.</i>	Slippery Rock
REUBEN WELTY SHRUM, SC.B.,	<i>English.</i>	McKeesport
STANTON RINEHART SMITH, SC.B.,	<i>Biology.</i>	Philadelphia
WALLACE JAMES SNYDER, SC.B.,	<i>Chemistry.</i>	Edinboro
ROBERT MCCURDY STEELE, PH.B.,	<i>Modern Languages.</i>	Latrobe
CHESTER JOSEPH TERRILL, A.B.,	<i>Economics.</i>	Albany, N. Y.
LOUIS JAMES VELTE, A.B.,	<i>Philosophy.</i>	Laramie, Wyo.
KATHALYN VONHOUTON VOORHIS, SC.B.,	<i>Biology.</i>	Ann Arbor, Mich.
AMELIA MARGARET WENSEL, A.B.,	<i>German.</i>	Brockport, N. Y.
SAMUEL KNOX WHITE, A.B.,	<i>Jurisprudence.</i>	Gettysburg
MAX CONRAD WIAANT, A.B.,	<i>History.</i>	Seranton

Graduate Students, 52.

THE SENIOR CLASS.

CLASS OF 1914.

NAME.	RESIDENCE.	ROOM.
DALE REESE ANGSTADT,	<i>Lewisburg.</i>	Lewisburg
RAYMOND LANCE APGAR,	<i>Trenton, N. J.</i>	No. 30, East College
CHARLES JACOB APPLGATE,	<i>Catasauqua.</i>	No. 17, East Wing
EARLE BUDD ARMSTRONG,	<i>Paulsboro, N. J.</i>	No. 17, East Wing
NEVIN GEORGE BACHMAN,	<i>Kempton.</i>	No. 31, East College
H. WALTER BAKER,	<i>Lancaster.</i>	No. 57, East College
RALPH EMERSON BELL,	<i>Munhall.</i>	No. 77, West College
DANIEL FLOYD K. BERTOLETTE,	<i>Manatawney.</i>	No. 23, West Wing
CHENEY KIMBER BOYER,	<i>Homestead.</i>	No. 3, Academy
LOUIS HENRY BOYER,	<i>Cressona.</i>	North Third Street
GUY CLEVELAND BROSIUS,	<i>Rauchtown.</i>	No. 71, East College
HARRY EARLE CAMPBELL,	<i>Shunk.</i>	No. 79, West College
CLARENCE BARNABAS CARVER,	<i>Carmel, N. Y.</i>	No. 79, East College
FRIEDMAN HOLMES CATHRALL,	<i>West Pittston.</i>	No. 30, West College
CHARLES ELLSWORTH COLEMAN,	<i>Boonton, N. J.</i>	No. 60, East College
OLIVE MANSFIELD COOPER,	<i>Cortland, N. Y.</i>	Women's College
DAYTON THOMAS CORSON,	<i>Paulsboro, N. J.</i>	No. 17, East Wing
SAMUEL HENRY COULTER,	<i>Lamney, Ireland.</i>	No. 94, East College
ROBERT JOHN CRANE,	<i>Katonah, N. Y.</i>	No. 80, East College

NAME.	RESIDENCE.	ROOM.
JOHN RUSSELL CRISWELL,	<i>Sharpsburg.</i>	No. 40, West College
RACHEL MIRIAM DAVIS,	<i>Woodstown, N. J.</i>	Women's College
HARRY DEWIRE,	<i>Winfield.</i>	Winfield
HAROLD MACILVAINE DORRELL,	<i>Alloway, N. J.</i>	No. 77, East College
CHARLES BRYANT DRAKE,	<i>Old Forge.</i>	No. 74, East College
RUTH HORTENSE EDWARDS,	<i>Williamsport.</i>	Women's College
MINNIE IOLA ETZWEILER,	<i>Lewistown.</i>	Women's College
ROBERT WILLIAM EVERALL,	<i>Sharon.</i>	No. 1, East College
WILLIAM HENRY EYSTER,	<i>Fisher's Ferry.</i>	No. 15, West College
ELLEN WOLFE FOCHT,	<i>Lewisburg.</i>	South Second Street
JASPER C. FRANTZ,	<i>Friendsville, Md.</i>	No. 1, East Wing
JOHN LUKE GEHMAN,	<i>Martindale.</i>	No. 69, West College
EARL BALLARD GLOVER,	<i>Erie.</i>	No. 14, West College
JOSHUA ROBERT GOLIGHTLY,	<i>Wilkes-Barre.</i>	No. 65, West College
ALBERT DONALD GRAY,	<i>Altoona.</i>	No. 85, West College
GEORGE THOMAS GROVE,	<i>Harrisburg.</i>	No. 78, East College
ROBERT CLARK HAGAN,	<i>Uniontown.</i>	North Third Street
FRANK RUSSELL HAMBLIN,	<i>Lewisburg.</i>	St. George Street
EUDORA REGINA HAMLER,	<i>Lewisburg.</i>	Market Street
MARIAN KATHRYN HARMAN,	<i>Montoursville.</i>	Women's College
WALTER WILLIAM HARRIS,	<i>Lewisburg.</i>	University Avenue

NAME.	RESIDENCE.	ROOM.
JOSEPH MUR HILLMAN,	<i>Shamokin.</i>	No. 58, East College
MIRIAM RUTH HOFFA,	<i>Lewisburg.</i>	South Fifth Street
JAMES RALPH IRWIN,	<i>Schuyler.</i>	No. 14, East Wing
DOROTHEA MARGUERITE JONES,	<i>Minersville.</i>	Women's College
GEORGE THOMPSON KEECH, JR.,	<i>Netcong, N. J.</i>	No. 11, East Wing
MILDRED RUTH KIRK,	<i>Clearfield.</i>	South Front Street
WILMA HARRIETTE SPEERS KNAPP,	<i>Hawley.</i>	Women's College
MARY ANNA KUNKLE,	<i>Lewisburg.</i>	Lewisburg
RALPH WARREN KUNKLE,	<i>Lewisburg.</i>	Lewisburg
HENRY GEORGE KUYL,	<i>Paterson, N. J.</i>	No. 50, East College
LELAND PROBASCO LANING,	<i>Bridgeton, N. J.</i>	North Third Street
ERNEST OLOF LINDBERG,	<i>Sag Harbor, N. Y.</i>	No. 93, West College
CHARLES WALTER LOTTE,	<i>Paterson, N. J.</i>	No. 83 East College
WALLACE CLINE LOWTHER,	<i>Punxsutawney.</i>	North Third Street
LOUIS FREDERICK LYNE, JR.,	<i>Jersey City, N. J.</i>	Lewisburg
ARTHUR SAWYER MAHONEY,	<i>Passaic, N. J.</i>	Lewisburg
SAMUEL HARRISON MARKOWITZ,	<i>Wilmington, Del.</i>	No. 20, East Wing
ROBERT RAY MCCOMBS,	<i>McClellandtown.</i>	No. 11, West College
FRANCES TERRY McNALL,	<i>Muncy.</i>	Women's College
RALPH HERMAN MOORE,	<i>Slippery Rock.</i>	No. 9, East Wing
THOMAS EDWARD MOORE,	<i>Las Animas, Colo.</i>	No. 10, West Wing

NAME.	RESIDENCE.	ROOM.
HOWARD BURTON MUSSER,	<i>South Williamsport.</i>	No. 48, East College
HELEN GRIFFIN OTT,	<i>Bridgeton, N. J.</i>	Women's College
LUCILE ELIZABETH OWENS,	<i>Lewisburg.</i>	Lewisburg
ROBERT JOHN PARMENTER,	<i>Elmira, N. Y.</i>	No. 1, East College
HAROLD EVANS POWELL,	<i>Scranton.</i>	No. 65, West College
WILLIAM DEAN READING,	<i>Franklin.</i>	St. George Street
FLORENCE ISABELLE REIMENSNYDER,	<i>Milton.</i>	Milton
WILLIAM STANLEY REITZ,	<i>Trevorton.</i>	No. 12, West College
JOHN WINTER RICE,	<i>Williamsport.</i>	No. 52, West College
EDWARD JOHN RICHARDS,	<i>Homestead.</i>	No. 9, East Wing
JESSE EARLE RILEY,	<i>Bridgeport, W. Va.</i>	No. 70, West College
KARL WHITMAN RIPPEL,	<i>Milton.</i>	No. 70, East College
FRED OSCAR SCHNURE,	<i>Milton.</i>	No. 48, East College
JOHN GRANVILLE SCOUTON,	<i>Dushore.</i>	No. 46, West College
LEVI HUBBARD SHATTUCK,	<i>Wellsboro.</i>	Market Street
MARIAN ESTHER SHIVERS,	<i>Haddonfield, N. J.</i>	Women's College
CLINTON FRANCIS SNYDER,	<i>Minersville.</i>	No. 86, East College
HARRY SYLVESTER STAHLER,	<i>Mauch Chunk.</i>	No. 23, West Wing
RAYMOND BEAUMONT STAPLETON,	<i>Mifflinburg.</i>	Mifflinburg
HELEN GLAZE STOUT,	<i>Milton.</i>	Milton
VICTOR FRANCIS SWENSON,	<i>Susquehanna.</i>	No. 45, West College

NAME.	RESIDENCE.	ROOM.
ALFRED SMITH VANOSTEN,	<i>Philadelphia.</i>	No. 110, East College
HELEN BOTTORF WAITE,	<i>Lock Haven.</i>	Women's College
HARRY BRUNGART WEAVER,	<i>Rebersburg.</i>	No. 72, East College
ALVIA MCGREGOR WELCHONS,	<i>Falls Creek.</i>	No. 10, East Wing
NORMAN WILLMER WHITED,	<i>Hawthorne.</i>	No. 11, East Wing
EDNA ALICE WHITTAM,	<i>Chester.</i>	Women's College
SAMUEL LEIDY WILSON,	<i>Phillipsburg.</i>	No. 16, West Wing
JOHN FRANCIS WINKLEBLECH,	<i>Milton.</i>	No. 22, West Wing
FRANK BEACHAM WORRILOW,	<i>Chester.</i>	North Third Street
DORRANCE DANA ZINN,	<i>Philippi, W. Va.</i>	No. 5, West College

Seniors, 92.

THE JUNIOR CLASS.

CLASS OF 1915.

NAME.	RESIDENCE.	ROOM.
WILLIAM ARISTA AFFRON,	<i>Sag Harbor, N. Y.</i>	No. 94, West College
JOSEPH WILLIAM ALESHOUCKAS,	<i>Great Neck, N. Y.</i>	No. 61, East College
MARION RUTH BANCROFT,	<i>Altoona.</i>	Women's College
FLORENCE BROWN BARBER,	<i>Lewisburg.</i>	South Second Street
FRANCES FOSTER BARBER,	<i>Lewisburg.</i>	South Second Street
JEREMIAH BUTLER BATES,	<i>Blossburg.</i>	No. 19, East Wing
MELVILLE BEARDSLEY,	<i>Philadelphia.</i>	St. George Street
ISABELLE FRANCES BOND,	<i>Lewisburg.</i>	South Seventh Street
WILLIAM ELTON BOTT,	<i>Wilmington, Del.</i>	No. 20, East Wing
MABEL PAULINE BOYER,	<i>Mt. Pleasant.</i>	Women's College
CHARLES WARREN BROWN,	<i>Lewisburg.</i>	Lewisburg
FRANCIS THEODORE BROWN,	<i>Lewisburg.</i>	Lewisburg
MABEL MAY BROWN,	<i>Clearfield.</i>	Women's College
MALCOLM BUFFINGTON,	<i>Brookville.</i>	No. 11, East College
FRED MEINZER BURLEW,	<i>Freneau, N. J.</i>	No. 84, West College
WILLIAM ADAM CAWLEY,	<i>Lewisburg.</i>	Lewisburg
EDGAR TILLMAN CLAPP,	<i>Milton.</i>	No. 56, East College
ALBERT JOHN CLARK,	<i>Towson, Md.</i>	No. 23, East Wing
EDWARD OLIVER CLARK,	<i>Towson, Md.</i>	No. 23, East Wing

NAME.	RESIDENCE.	ROOM.
EDMUND BELFOUR CLINE,	<i>Saltsburg.</i>	No. 14, East Wing
HOPE CRAIG,	<i>Brackenridge.</i>	Women's College
RAYMOND E. CROSS,	<i>Shohola.</i>	North Third Street
FRANK PETER CRUIKSHANK,	<i>Somerville, Mass.</i>	North Third Street
EMMA ELIZABETH DILLON,	<i>Trenton, N. J.</i>	Lewisburg
IRA SYLVESTER DUNKLE,	<i>Lewisburg.</i>	Lewisburg
GARDNER WADE EARLE,	<i>Picture Rocks.</i>	No. 4, East Wing
HAROLD CHARLES EDWARDS,	<i>Gouldsboro.</i>	No. 59, East College
ARTHUR ELTON EVANS,	<i>Wilkes-Barre.</i>	No. 54, East College
MARY NASH EVANS,	<i>Yonkers, N. Y.</i>	Women's College
ELMER ELLSWORTH FAIRCHILD,	<i>Lewisburg.</i>	Lewisburg
FREDERICK HARRISON FAHRINGER,	<i>Sunbury.</i>	Sunbury
WALTER DAYTON FARLEY,	<i>Lewisburg.</i>	South Fourth Street
DAVID GERALD FITZGERALD,	<i>Mt. Pleasant.</i>	No. 3, East Wing
RALPH WENDELL FRYE,	<i>Monessen.</i>	No. 23, West College
JOSEPH FRANK GDANIEC,	<i>Mt. Carmel.</i>	No. 64, East College
CARL EDWARD GEIGER,	<i>Williamsport.</i>	No. 90, East College
WILLIAM THOMAS GOODWIN,	<i>Coatesville.</i>	No. 27, West College
SIDNEY GRABOWSKI,	<i>Nanticoke.</i>	No. 78, West College
MARGARET CHRISTINE GRETZINGER,	<i>Lewisburg.</i>	Lewisburg
CLAIR GEPHART GROOVER,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
CARRIE MARY JANE GRUGAN,	<i>West Milton.</i>	West Milton
ALBERT JOSEPH HAMLIN,	<i>Philadelphia.</i>	No. 120, East College
JOHN WILLIAM HEDGE,	<i>Scenery Hill.</i>	No. 87, East College
GEORGE PEUTELOW HERN,	<i>Passaic, N. J.</i>	No. 10, West College
ROLAND KEILHOLTZ HOKE,	<i>Emmitsburg, Md.</i>	No. 91, East College
ROBERT P. HOPKINS,	<i>Carbondale.</i>	North Third Street
HUGH CHARLES HOUSER,	<i>Wellsboro.</i>	North Third Street
GEORGE ALLISON IRLAND,	<i>Lewisburg.</i>	Market Street
ROLAND MONROE JONES,	<i>Trevorton.</i>	No. 90, West College
PEARL I. KAWEL,	<i>Sunbury.</i>	Sunbury
WILLMON KEISER,	<i>Mt. Carmel.</i>	Lewisburg
HAROLD RICHARD KELLY,	<i>Titusville.</i>	Lewisburg
BENJAMIN WINTERS LAIDLAW,	<i>Orange, N. J.</i>	No. 4, East College
RAMONA LENINGTON,	<i>Scranton.</i>	Women's College
PAUL BENTON LEWIS,	<i>Lewisburg.</i>	Lewisburg
LEDA ALICE MACFARLAND,	<i>Milton.</i>	Milton
JOSIAH JACOB MARKLE,	<i>Hanover.</i>	No. 15, East College
ESTHER MABEL MCCORMICK,	<i>Tyrone.</i>	Women's College
FRED FELTON MELLOTT,	<i>Everett.</i>	No. 31, West Wing
GILBERT JUDSON MEREDITH, JR.,	<i>Felton, Del.</i>	No. 4, East Wing
CARLTON ALFRED MICHAEL,	<i>Factoryville.</i>	No. 15, West College

NAME.	RESIDENCE.	ROOM.
EDNA AMELIA MILLER,	<i>Williamsport.</i>	Williamsport
WINIFRED WILBUR MILLER,	<i>Bridgeton, N. J.</i>	Women's College
NORMAN MITTERLING,	<i>Sunbury.</i>	No. 23, West Wing
WILLARD LESTER MOYER,	<i>Muncy.</i>	St. George Street
HAROLD STANLEY MYATT,	<i>Philadelphia.</i>	No. 22, East Wing
CLARENCE WILLIAM NICHOL,	<i>Pittsburgh.</i>	No. 28, West Wing
RAYMOND FORD NICHOLS,	<i>Tamaqua.</i>	No. 51, West College
ROBERT ELSMERE OBERDORF,	<i>Sunbury.</i>	No. 61, West College
JESSIE MARGUERITE OSWALT,	<i>Altoona.</i>	Women's College
EDWARD WEDDELL PANGBURN,	<i>Elizabeth.</i>	No. 75, West College
WILLIAM LOUIS PARK,	<i>Montandon.</i>	Montandon
GRANVILLE PATTON PATTERSON,	<i>Ashland.</i>	Lewisburg
ETHEL ELIZABETH PETERSON,	<i>Penn's Grove, N. J.</i>	Women's College
RUDOLPH PETERSON,	<i>Lewisburg.</i>	Lewisburg
HAROLD EVANS POWELL,	<i>Scranton.</i>	No. 65, West College
ROBERT PREISKEL,	<i>Passaic, N. J.</i>	No. 67, West College
ELLIS LAWRENCE RAESLEY,	<i>Wilkes-Barre.</i>	No. 37, West College
WILLIAM WALLACE RIDGE,	<i>Lewisburg.</i>	Lewisburg
JOHN BENJAMIN RISHEL,	<i>Hughesville.</i>	No. 52, West College
CLOYD PEOPLES ROBB,	<i>New Florence.</i>	No. 11, East College
EDGAR LLOYD ROGERS,	<i>Nittany.</i>	Academy

NAME.	RESIDENCE.	ROOM.
DWITE HAYDEN SCHAFFNER,	<i>Falls Creek.</i>	No. 118, East College
WILLIAM HILLIARD SCHUYLER,	<i>Milton.</i>	Milton
CHARLES EDGAR SELLERS,	<i>Emmitsburg, Md.</i>	North Third Street
RUSSELL CONWELL SHIPMAN,	<i>Sunbury.</i>	Lewisburg
OMAR HARRISON SMITH,	<i>Blairsville.</i>	No. 98, East College
JOHN HORATIO SPEER, JR.,	<i>West Chester.</i>	No. 61, West College
GEORGE SALVADORE STEVENSON,	<i>Vineland, N. J.</i>	No. 2, West Wing
MIRIAM JUSTINIA STRICKLER,	<i>Lewisburg.</i>	Lewisburg
MYRNA RUTH STRICKLER,	<i>Lewisburg.</i>	Lewisburg
DEAN DONNELL STURGIS,	<i>Uniontown.</i>	North Third Street
EARL SCHNEIDER TEED,	<i>Oregon Hill.</i>	No. 16, West Wing
HOWARD ARTHUR VAN DYNE,	<i>Great Neck, N. Y.</i>	No. 66, West College
MARK MCNINCH WALTER,	<i>Mt. Carmel.</i>	Lewisburg
WALLACE JAMES WARD,	<i>Union City.</i>	No. 32, West Wing
LAURENS WEAVER WEDDELL,	<i>Woodbury, N. J.</i>	No. 91, West College
WINIFRED WERKHEISER,	<i>West Milton.</i>	West Milton
FRANK FORREST WHITTAM,	<i>Chester.</i>	North Third Street
ANNA WILLIAMS,	<i>Nanticoke.</i>	Women's College
THOMAS BENNETT WILLIAMS,	<i>Saint Clair.</i>	No. 76, West College
WILLIAM THOMAS WINDSOR,	<i>Bradford.</i>	No. 41, West College
JOHN MOORE WINGERT,	<i>Lewisburg.</i>	No. 44, East College
HIRAM MICHAEL WOLFE,	<i>Lewisburg.</i>	No. 22, West Wing

THE SOPHOMORE CLASS.

CLASS OF 1916.

NAME.	RESIDENCE.	ROOM.
SAMUEL GUY ALTER,	<i>Parnassus.</i>	No. 100, East College
ESKEL VALENTINE ANDERSON,	<i>Monessen.</i>	No. 40, West College
DERB WILLIS BARTHOLEMEW,	<i>Lewisburg.</i>	Market Street
RAY PAUL BIGLER,	<i>Bentleyville.</i>	No. 89, East College
WADE FRANCIS BLACKBURN,	<i>Stahlstown.</i>	No. 12, East College
SAMUEL MILTON BRYANT,	<i>Lewistown.</i>	No. 8, West Wing
DOROTHY ELIZABETH BUNNELL,	<i>Union, N. J.</i>	Women's College
BRUCE EDWARD BUTT,	<i>New Midway, Md.</i>	No. 81, East College
EDGAR CARLTON CAMPBELL,	<i>Shunk.</i>	No. 72, West College
LESLIE HARLAND CAMPBELL,	<i>Shunk.</i>	No. 59, West College
HARRIET MARTIN CARPENTER,	<i>Woodbury, N. J.</i>	Women's College
RUSSELL SAVIDGE CONRAD,	<i>Sunbury.</i>	Sunbury
MAURICE BACON COOK,	<i>Greenwich, N. J.</i>	No. 12, West Wing
WILLIAM ELSTON COWIN,	<i>Franklin.</i>	No. 101, East College
WALTER SUPLEE CROUSE,	<i>Honey Brook.</i>	No. 68, West College
SAMUEL MARSHALL DAVENPORT,	<i>Plymouth.</i>	No. 6, East Wing
ROSCOE GRANGER DAVIS,	<i>West Chester.</i>	No. 63, West College
JOHN JONATHAN DE HAVEN,	<i>Duncannon.</i>	No. 25, East Wing
RUTH EMLYN EMBREY,	<i>Mahanoy City.</i>	South Fourth Street

NAME.	RESIDENCE.	ROOM.
MARGARET WASHINGTON EVANS,	<i>Plymouth.</i>	Women's College
RUSSELL WILLIAM EVERETT,	<i>Slatinington.</i>	No. 104, East College
JAMES BURK FOLEY,	<i>Renovo.</i>	No. 38, West College
CYRUS BROWN FOLLMER,	<i>Milton.</i>	No. 40, West College
CARRIE DUNBAR FORESMAN,	<i>Lewisburg.</i>	South Seventh Street
MARY ELLA FREED,	<i>Williamsport.</i>	Women's College
ARTHUR WILLIAM FULTON,	<i>Hublersburg.</i>	No. 12, East Wing
HAROLD WENDELL GIFFIN,	<i>Newton, N. J.</i>	No. 9, West Wing
CLARENCE EDWARD GLASS,	<i>Reading.</i>	No. 25, East Wing
HELEN MARGARET GROFF,	<i>Washington, N. J.</i>	Women's College
EDWIN CHARLES HAGEMAN,	<i>Newark, N. J.</i>	No. 90, West College
SARA M. HAGGERTY,	<i>Nauvoo.</i>	Women's College
HILDRED HOWARD HANN,	<i>Norwich, N. Y.</i>	No. 5, East Wing
MARIE ELIZABETH HARER,	<i>Blossburg.</i>	Women's College
FREDERICK TWINING HARRIS,	<i>Susquehanna.</i>	No. 45, West College
LEWIS STOUT HEINEN,	<i>Milton.</i>	Milton
HAROLD BURROWS HENDERSON,	<i>Montgomery.</i>	No. 33, West College
SARA IRENE HILBISH,	<i>Northumberland.</i>	Women's College
HELEN IRENE HORTON,	<i>West Brownsville.</i>	South Front Street
THOMAS LEWIS JAMES,	<i>Sharon.</i>	No. 52, East College
JOHN FREDERICK JEFFERY,	<i>Wesleyville.</i>	No. 22, East Wing

NAME.	RESIDENCE.	ROOM.
HELEN JENKINS,	<i>Franklin.</i>	Women's College
MARY LANGLEY JONES,	<i>West Pittston.</i>	Women's College
CECELIA KITLOWSKI,	<i>Nanticoke.</i>	Women's College
GEORGIE HAZEL KURTZ,	<i>Franklin.</i>	South Sixth Street
MARY BELLE LEES,	<i>Juniata.</i>	Women's College
BURTON FREDERICK LEWIS,	<i>Wilkes-Barre.</i>	No. 82, West College
CYRIL ELTON LEWIS,	<i>Plymouth.</i>	No. 24½, East Wing
HELEN DERR LEWIS,	<i>Watsonstown.</i>	Watsonstown
HARRY TUTTLE LOFFT,	<i>Collingswood, N. J.</i>	No. 78, West College
WILLIAM ARTHUR LOFFT,	<i>Collingswood, N. J.</i>	No. 78, West College
JOSEPH EARL MALIN,	<i>Frazer.</i>	No. 13, East Wing
RUTH SPRAGUE MATTERN,	<i>Huntingdon.</i>	Women's College
STERLING RAYMOND MENSCH,	<i>Wilkes-Barre.</i>	No. 102, East College
GEORGE FUNSTON MILLER,	<i>Lewisburg.</i>	South Second Street
THERESA CATHERINE MCCOLLUM,	<i>Montrose.</i>	Women's College
MARGARET MORTON MCFARLAND,	<i>Northumberland.</i>	Northumberland
OLIVER HAYES MCFARLAND,	<i>Watsonstown.</i>	Watsonstown
ELIZABETH LUCILE MCGEE,	<i>Parkersburg, W. Va.</i>	Women's College
GEORGIANA MOORE,	<i>Juniata.</i>	Women's College
JAMES EDWARD NANCARROW,	<i>Jersey Shore.</i>	No. 79, West College
GEORGE H. NEFF, JR.,	<i>Sunbury.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
EVERT LAWRENCE NOBLE,	<i>Philadelphia.</i>	No. 47, East College
HIRAM PERCIVAL NORMAN,	<i>Sunbury.</i>	Sunbury
MILTON JARRETT NORMAN,	<i>Sunbury.</i>	Sunbury
ERIC ADAM OESTERLE,	<i>Woodstown, N. Y.</i>	No. 55, East College
ELSIE MARTHA PARK,	<i>Montandon.</i>	Women's College
OLIVE MILLICENT PARK,	<i>Montandon.</i>	Montandon
AMY LLEWELLYN PATTERSON,	<i>Eatontown, N. J.</i>	Women's College
CLARENCE WILLIAM PETERS,	<i>Ligonier.</i>	No. 118, East College
DAYTON LEO RANCK,	<i>New Columbia.</i>	New Columbia
GRANT KIMBER RAWSON,	<i>Atlantic City, N. J.</i>	No. 8, East College
NORMAN JACOB REHMAN,	<i>Newark, N. J.</i>	No. 91, West College
ANNA LOIS REYNOLDS,	<i>Clintondale, N. Y.</i>	Women's College
ARCHIBALD MCCORMICK RIPPEL,	<i>Milton.</i>	Milton
KENNETH COLQUHOUN RITCHIE,	<i>Rahway, N. J.</i>	No. 12, East Wing
CLYDE EDWARD RUNK,	<i>Harrisburg.</i>	North Third Street
JEROME CRANMER SALSURY,	<i>Monroeton.</i>	No. 27, East Wing
HOMER MORRISON SANDERS,	<i>Vicksburg.</i>	No. 11, West Wing
WILLIAM LEE SHOWERS,	<i>West Milton.</i>	West Milton
ELLIS SARGENT SMITH,	<i>Rochester, N. Y.</i>	No. 21, West College
HAROLD EMERSON SMITH,	<i>Edgewood Park.</i>	No. 9, East College
JAMES RUSSELL SNYDER,	<i>Bentleyville.</i>	No. 85, East College

NAME.	RESIDENCE.	ROOM.
BAKER FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Market Street
GRACE ISABEL SUTTON,	<i>West Newton.</i>	Women's College
LESTER ALBERT SWITZER,	<i>Hawley.</i>	No. 88, East College
CHARLES EUGENE TILTON,	<i>Phillipsburg, N. J.</i>	No. 77, East College
ELNORA LOUISE TRECOTT,	<i>Berwick.</i>	Women's College
LOUIS NICOLI TRIPICIAN,	<i>Atlantic City, N. J.</i>	North Third Street
FRANK GEORGE URBANOWICZ,	<i>Mt. Carmel.</i>	No. 64, East College
PAUL W. VAN DEN BURGH,	<i>Stockport, N. Y.</i>	No. 48, West College
SHAILER WARREN VENTRES,	<i>Port Allegany.</i>	No. 13, East Wing
BERTHA WAGNER,	<i>Montgomery.</i>	Montgomery
EMMA ESTHER WEDDLE,	<i>West Newton.</i>	Women's College
FLORA BELLE WEDDLE,	<i>West Newton.</i>	Women's College
RUTH WILLIAMS,	<i>Parsons.</i>	Women's College
HENRY CHARLES WOLFE,	<i>Lewisburg.</i>	St. George Street
VIRGINIA BLANCHE WOOD,	<i>Washington.</i>	Women's College
CHARLES RHOADES WRIGHT,	<i>Trenton, N. J.</i>	No. 49, East College
RUBY JANE YOUNG,	<i>Dewart.</i>	Dewart

Sophomores, 99.

THE FRESHMAN CLASS.

CLASS OF 1917.

NAME.	RESIDENCE.	ROOM.
MEREDITH LUFIBARY ABBOTT,	<i>Glassboro, N. J.</i>	No. 17, West Wing
MILES DOMER ACKERMAN,	<i>Turbotsville.</i>	No. 55, East College
EDWIN EWART AUBREY,	<i>Kingston.</i>	No. 1, East Wing
RUTH BACHMAN,	<i>Stroudsburg.</i>	Women's College
RUTH BALLENTINE,	<i>Clarion.</i>	Women's College
GEORGE BARNHART,	<i>Sunbury.</i>	Sunbury
RUTH PAULINE BARTHOLD,	<i>Bethlehem.</i>	Women's College
HAROLD AMOS BEERS,	<i>Watertown, Conn.</i>	No. 43, West College
GEORGE THOMAS BENDER,	<i>Lewisburg.</i>	Lewisburg
FRED ELKANAH BENEDICT,	<i>Canton.</i>	No. 13, West Wing
ARNOLD LEIGH BENTON,	<i>Bradford.</i>	No. 36, West College
EUGENE PETER BERTIN,	<i>Williamsport.</i>	No. 87, West College
JENNIE ALENA BIRTH,	<i>Nescopeck.</i>	Women's College
CHARLES MERRILL BOUST,	<i>Shamokin Dam.</i>	Shamokin Dam
RUSSELL WASHINGTON BOWERSOX,	<i>Sunbury.</i>	Sunbury
PETER PAUL BRANTLEY,	<i>Schnectady, N. Y.</i>	No. 16½, East Wing
FRED CHARLES BRENNER,	<i>Hollisdaysburg.</i>	No. 18, East College
HELEN CHRISTINA BROWN,	<i>Morristown, N. J.</i>	Women's College
FOUNTAIN BURLEW,	<i>Freneau, N. J.</i>	No. 2, East College

NAME.	RESIDENCE.	ROOM.
CHARLES BUTCHINSKI,	<i>Nanticoke.</i>	No. 10, West Wing
RALPH EMERSON BYERS,	<i>Marianna.</i>	No. 65, East College
LEROY PIERRE CALKIN,	<i>Atlantic City, N. J.</i>	No. 20, East College
JAMES ARLING CASE,	<i>Boonton, N. J.</i>	No. 43, East College
GEORGE BECHT CHAMPION,	<i>Montoursville.</i>	No. 88, West College
MARGARET MURRAY COLLINS,	<i>Lewisburg.</i>	Lewisburg
PAUL HACKETT COLLINS,	<i>Salem, N. J.</i>	No. 18, West Wing
JOHN JOSEPH CONWAY,	<i>Amsterdam, N. Y.</i>	No. 42, West College
JEANNETTE COOKE,	<i>Haddonfield, N. J.</i>	Women's College
WILLIAM HARVEY CRAIGHEAD,	<i>Elizabeth.</i>	No. 75, West College
MAURICE HOWARD CRYDER,	<i>Tyrone.</i>	No. 22, East College
EARL NEAGLEY DEPPEN,	<i>Sunbury.</i>	Sunbury
JOSEPH JAMES DIRZULAITIS,	<i>Mt. Carmel.</i>	No. 63, East College
ROBERT DONALDSON,	<i>DuBois.</i>	No. 19, West Wing
ANNA EMELINE DOWNING,	<i>West Nanticoke.</i>	Women's College
DONALD ROSS DUNKLE,	<i>Lewisburg.</i>	Lewisburg
VIOLA ERDMAN ECKERT,	<i>Philadelphia.</i>	Women's College
LEWIS ARTHUR EYSTER,	<i>Fisher's Ferry.</i>	No. 86, West College
CARL DALIUS FELTON,	<i>Sunbury.</i>	Sunbury
RALEIGH MILTON FELTON,	<i>Connellsville.</i>	No. 73, West College
CHARLES HENRY WASHINGTON FISHER,	<i>Ashland.</i>	No. 115, East College

NAME.	RESIDENCE.	ROOM.
HOWARD CHRISTOPHER FISHER,	<i>Shamokin Dam.</i>	Shamokin Dam
JOSEPH ROSSER FISHER,	<i>New Brighton.</i>	No. 15, West Wing
BRUCE DALLAS GALBRAITH,	<i>Bridgeton, N. J.</i>	No. 8, West Wing
WARNER MILLER GALLOWAY,	<i>Lewisburg.</i>	Lewisburg
WILLIAM JOHN GEATING,	<i>Ashland.</i>	No. 112, East College
CHARLES CLIFFORD GILLETTE,	<i>Rushville.</i>	No. 93, West College
EARL LEROY GRACE,	<i>Penn Yan, N. Y.</i>	No. 14, West Wing
JOHN AUGUSTUS GRAY, JR.,	<i>Milton.</i>	Milton
DONALD ALBERT HAMAN,	<i>Eagles Mere.</i>	No. 62, East College
ANNA ELLIS HANKINS,	<i>Quinton, N. J.</i>	Women's College
LILLIAN HELENA HANNOLD,	<i>Paulsboro, N. J.</i>	Women's College
FRANCES GERALDINE HANSON,	<i>Flemington, N. J.</i>	Women's College
CLARENCE OLIVER HARTMAN,	<i>Port Clinton.</i>	No. 28, East Wing
FRANK SLAYSMAN HARTMAN,	<i>Elysburg.</i>	No. 39, East College
SARAH ALICE HASLAM,	<i>Philadelphia.</i>	Women's College
ALBERT WAYNE HATFIELD,	<i>Newark, N. J.</i>	No. 90, West College
CHARLES JOSEPH HAY,	<i>Pottsville.</i>	No. 108, East College
DONALD DAVID HAYES,	<i>Hartleton.</i>	No. 47, West College
JOHN ATHERTON HEBERLING,	<i>Shickshinney.</i>	No. 8, East College
NORMAN RAE HILL,	<i>Newberry.</i>	No. 58, West College
HARRIET EDNA HILTY,	<i>Vandergrift.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
EDITH McCLONG HORTON,	<i>Millville, N. J.</i>	Women's College
MARY ELIZABETH HUMPHREYS,	<i>Nanticoke.</i>	Women's College
HENRY SNYDER ILLINGSWORTH,	<i>Tyrone.</i>	No. 42, East College
KATHRYN BLANCHE JENKINS,	<i>Milton.</i>	Milton
ELLA CORINNE JONES,	<i>Montrose.</i>	Women's College
EDWARD GRANT KASE,	<i>Williamsport.</i>	No. 24, East College
BENJAMIN FRANKLIN KENDIG,	<i>Salunga.</i>	No. 38, East College
HOLMAN GEORGE KNOUSE,	<i>Sunbury.</i>	No. 15, East Wing
DONALD WILLIAM KORTH,	<i>Wilkes-Barre.</i>	No. 20, West Wing
CLARENCE MACLAY KRINER,	<i>Waynesboro.</i>	No. 16, East Wing
OTTO UNKREY LAWRENCE,	<i>Emlenton.</i>	No. 84, East College
ELIZABETH BOYD LEHR,	<i>Haddonfield, N. J.</i>	Women's College
HOWARD CHESTER LIEBENSBERGER,	<i>Williamsport.</i>	No. 95, East College
WALTER TOMLIN LODGE,	<i>Paulsboro, N. J.</i>	No. 17, East Wing
ALFRED JOSEPH MARRON,	<i>Media.</i>	No. 12, West Wing
ROYDEN STROVEL MATLACK,	<i>Haddon Heights, N. J.</i>	No. 34, East College
CHARLES DAVID MAURER,	<i>Shamokin.</i>	No. 16, East Wing
JAMES ROBERT MCCORMICK,	<i>Tyrone.</i>	No. 32, East College
EVELYN MCGANN,	<i>Lewisburg.</i>	Lewisburg
EDWIN ROLAND McNUTT,	<i>Vandergrift.</i>	No. 54, West College
LORA ELLEN McQUAY,	<i>Emporium.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
DELETH EBER MELLINGER,	<i>Ephrata.</i>	No. 25, East Wing
DONALD RAYMOND MILLER,	<i>Mifflinburg.</i>	Mifflinburg
DAVID LANDERS MINK,	<i>Sharon.</i>	No. 53, East College
ADOLPH JOSEPH MOCKAITIS,	<i>Shenandoah.</i>	No. 29, West College
OLIVE EWING MOORE,	<i>Bridgeton, N. J.</i>	Women's College
PAUL CUSTER MOSER,	<i>Connellsville.</i>	No. 64, West College
ST. CLAIR MURRAY,	<i>Binghamton, N. Y.</i>	No. 30, West Wing
WALTER CHRISTOPHER MYERS,	<i>Jersey Shore.</i>	No. 28, East Wing
REGINALD SPOFFORD NEWBURY,	<i>Point Pleasant, N. J.</i>	No. 5, East College
JESSE WARREN NOLL,	<i>Lewisburg.</i>	Lewisburg
VERNIE GRACE NOLL,	<i>Lewisburg.</i>	Lewisburg
EDNA ADETA OVERFIELD,	<i>West Pittston.</i>	Women's College
JEANNETTE CAROLYN OWENS,	<i>Lewisburg.</i>	Lewisburg
GEORGE GRATHAM PAINTER,	<i>Muncy.</i>	No. 97, East College
SARA ASENATH PARK,	<i>Ben Avon.</i>	Women's College
EARL STEWARD PEDIGO,	<i>Corry.</i>	No. 25, East College
NELS EDWARD PETERSON,	<i>Ralston.</i>	Lewisburg
ELMER SMITH PETTIT,	<i>Woodstown, N. J.</i>	No. 40, East College
GROVER CLEVELAND POUST,	<i>Muncy.</i>	No. 2, West Wing
KATHRYN ELIZABETH REDELIN,	<i>Freeland.</i>	Women's College
MARY ELIZABETH REESE,	<i>Lansford.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
HERMAN FREDERICK REICH,	<i>Sunbury.</i>	No. 15, East Wing
ALEXANDER MCPHERSON RUSSELL,	<i>Bedford.</i>	No. 56, West College
PAUL E. SANDEL,	<i>Lewisburg.</i>	Lewisburg
SAMUEL LEROY SEEMAN,	<i>Oakmont.</i>	No. 24, West College
JOHN IRWIN SHAFFER,	<i>West Chester.</i>	No. 62, West College
RUSSELL M. SHEARER,	<i>Northumberland.</i>	Northumberland
DON BENITO SHIPMAN,	<i>Sunbury, R. D. 4.</i>	No. 80, West College
HARLEY NEVIN SHIPMAN,	<i>Sunbury.</i>	Sunbury
EDWARD CONRAD SHOWACRE,	<i>Cumberland, Md.</i>	No. 116, East College
FRANCES H. SILBERSTEIN,	<i>Philadelphia.</i>	Women's College
CHARLES BUNNELL SIPLEY,	<i>Nicholson.</i>	No. 77, West College
CALVIN JAMES SMITH,	<i>Bellefonte.</i>	No. 7, East College
GEORGE HAROLD SMITH,	<i>New Brighton.</i>	No. 15, West Wing
CHARLES AUSTIN SOARS,	<i>Norristown.</i>	No. 109, East College
IRWIN POTTER SOWERS,	<i>Pottersville, N. J.</i>	No. 19, East Wing
CLARA RAY SPEARE,	<i>Lewisburg.</i>	Lewisburg
RAYMOND EYLER SPRENKLE,	<i>Waynesboro.</i>	No. 21, East Wing
CLINTON IRWIN SPROUT,	<i>Picture Rocks.</i>	No. 92, East College
WARNER SPURGEON SQUIBB,	<i>McKeesport.</i>	No. 34, West College
ALFRED TENNYSON STEININGER,	<i>Lewisburg.</i>	Lewisburg
FRANK EDWARD STETLER,	<i>Lewisburg.</i>	Lewisburg

NAME.	RESIDENCE.	ROOM.
ALEXANDER STORER,	<i>Pitman, N. J.</i>	No. 21, East College
EDITH PAULINE SUPERKO,	<i>Nanticoke.</i>	Women's College
EBER NELSON SWOPE,	<i>Waynesboro.</i>	No. 21, East Wing
HOMER WORRELL TEAMER,	<i>Malvern.</i>	No. 10, East College
RICHARD EVELEIGH THOMAS,	<i>Nanticoke.</i>	No. 10, West Wing
MORRIS EUGENE TROOST,	<i>Vineland, N. J.</i>	No. 26, West Wing
MARGARET GARRISON WALKER,	<i>West Chester.</i>	Women's College
ETHEL VIOLA WARD,	<i>Lewisburg.</i>	Lewisburg
CLARENCE REUBEN WEBER,	<i>Rebersburg.</i>	No. 13, West Wing
EARLE BAXTER WEST,	<i>Apollo.</i>	No. 55, West College
YEURITH LEVINIA WESTBAY,	<i>Elizabeth.</i>	Women's College
AMANDA LAURA WHITAKER,	<i>Millville, N. J.</i>	Women's College
FRANK E. WILLIAMS,	<i>Nanticoke.</i>	No. 10, West Wing
ARTHUR ROLLAND YON,	<i>Atlantic City, N. J.</i>	No. 19, East College
	Freshmen, 138.	

NON-MATRICULATES.

NAME.	RESIDENCE.	ROOM.
JOHN MURPHY ARCHER,	<i>Bridgeton, N. J.</i>	No. 33, West Wing
*LESTER CALVIN BUFFINGTON,	<i>Brookville.</i>	No. 23, East College
*VERA QUINDARE COUCH,	<i>Watsontown.</i>	Watsontown
*RALPH BECKER DERR,	<i>Milton.</i>	Milton
DONALD ANTHONY FUSIA,	<i>Wilkinsburg.</i>	No. 26, East College
LOUIS H. HARRIS,	<i>Lewisburg.</i>	Lewisburg
*ROBERT THOMAS HARRIS,	<i>Baltimore, Md.</i>	No. 14, West Wing
LIVINGSTON SPRAKER HINCKLEY, JR.,	<i>Newark, N. J.</i>	No. 22, West College
HAROLD SAMUEL HOPLER,	<i>Williamsport.</i>	No. 99, East College
JAMES PREDMORE HURLBURT,	<i>Montandon.</i>	Montandon
AILEEN AUDREY JOHNSTON,	<i>Avonmore.</i>	Women's College
MILLER ALANSON JOHNSON,	<i>Lewisburg.</i>	Lewisburg
HELEN ELIZABETH KROUSE,	<i>Altoona.</i>	Women's College
JOHN FRANKLIN LONG,	<i>Flemington.</i>	No. 26, West College
WARREN RAY MCWHINNEY,	<i>Homestead.</i>	Lewisburg
FLOYD BURLIN MELLANDER,	<i>Mt. Jewett.</i>	Lewisburg
EDNA LENORE SAYENGA,	<i>Pittsburgh.</i>	Lewisburg

* Entered January 6, 1914.

NAME.	RESIDENCE.	ROOM.
RICHARD JONES WAGENSELLER TEMPLIN,	<i>Sunbury.</i>	Sunbury
EARLE TOPHAM,	<i>Philadelphia.</i>	North Third Street
CARL ALBERT WALDNER,	<i>Ashland.</i>	No. 114, East College

Non-matriculantes, 20.

SUMMARY.

Graduate Students	52
The Senior Class	92
The Junior Class	104
The Sophomore Class	99
The Freshman Class	138
Non-Matriculantes	20
<hr/>	
Total in College of Liberal Arts.....	505

THE ACADEMY.

INSTRUCTORS.

WALTER SAMUEL WILCOX, SC.M.,
PRINCIPAL.

JOSEPH LINCOLN CHALLIS, A.M.,
LATIN AND HISTORY.

CHARLES CARPENTER FRIES, A.M.,
GREEK.

PERRY AQUILA CARIS, A.B.,
SCIENCE.

FREDERICK BENTLEY IGLER, A.B.,
ENGLISH.

MARGARET ELLEN KALP, A.B.,
LATIN.

MARY GEORGIANA STANTON, PH.B.,
GERMAN.

CHARLES KIMBER BOYER,
GEOMETRY.

EDGAR LLOYD ROGERS,
ALGEBRA.

ACADEMY STUDENTS.

FOURTH FORM.

NAME.	RESIDENCE.	ROOM.
ARTHUR MILTON BARNETTE,	<i>Newcastle.</i>	No. 9, Main Hall
HARRY RETTINGER BITTERMAN,	<i>Lykens.</i>	No. 21, East Hall
DAVID N. BOSWELL,	<i>Lewisburg.</i>	Home
STANLEY NEWTON HARRIS,	<i>Lewisburg.</i>	Home
LESTER ADAM HERB,	<i>Snydertown.</i>	Home
ALEM HULL, JR.,	<i>Montgomery.</i>	Home
STANFORD LEPLEY,	<i>Winfield.</i>	Home
RICHARD K. LOEWEN,	<i>Tamaqua.</i>	No. 23, East Hall
CHARLES AFFLERBACK REED,	<i>Philadelphia.</i>	No. 5, Main Hall
GEORGE FRANKLIN RISSEL,	<i>Pottsgrove.</i>	Home
JOSEPH BERNARD RYNKIEWICZ,	<i>Shenandoah.</i>	No. 21, East Hall
DANIEL RIDGEWAY STEELE,	<i>Newton, N. J.</i>	No. 18, East Hall
FRANK LAWRENCE SULLIVAN,	<i>Passaic, N. J.</i>	No. 22, East Hall
HIRAM JACOB WAGNER,	<i>Smithton.</i>	No. 6, Main Hall

THIRD FORM.

J. MONTGOMERY CONNER,	<i>Pittsburgh.</i>	No. 12, Main Hall
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NAME.	RESIDENCE.	ROOM.
WEBER LATCHA GERHART, JR.,	<i>Lewisburg.</i>	Home
GEORGE MERRILL KUNKEL,	<i>Lewisburg, R. F. D.</i>	Home
FRANKLIN NEWMAN,	<i>Lewisburg.</i>	Home
JAMES ALFRED PANGBURN,	<i>Elizabeth.</i>	No. 7, Main Hall
HAROLD CLIFFORD WILSON,	<i>Elizabeth, N. J.</i>	No. 8, Main Hall
CLYDE WILLIAM WITHINGTON,	<i>Snydertown.</i>	Home
GEOFFREY DWINNELL YEATON,	<i>Shamokin.</i>	No. 11, Main Hall

SECOND FORM.

DAVID CARL BARNHART,	<i>Pleasant Unity.</i>	No. 17, East Hall
LORIoT D. BOZORTH, JR.,	<i>Blackwood, N. J.</i>	No. 4, Main Hall
JOHN CATHERMAN,	<i>Hartleton.</i>	No. 9, East Hall
WILLIAM EDWIN HOFFMAN,	<i>Tyrone.</i>	No. 10, East Hall
FELIX W. MIKOLAJCZAK,	<i>Nanticoke.</i>	West College
HARRY S. PAUL, JR.,	<i>Oakmont.</i>	No. 11, East Hall
BERNHARDT RANSOM SEEMANN,	<i>Oakmont.</i>	No. 13, East Hall
CLAUDE JENNINGS SMITH,	<i>Smithton.</i>	No. 6, Main Hall
MANUEL DE JESUS SUROS,	<i>Manzanillo, Cuba.</i>	No. 15, East Hall

STUDENTS PURSUING SELECT STUDIES.

FRANK DANOWSKI,	<i>Shenandoah.</i>	No. 19, East Hall
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NAME.	RESIDENCE.	ROOM.
ABRAHAM LINCOLN MAHONY,	<i>Passaic, N. J.</i>	No. 19, East Hall
STUART WALTER,	<i>Mount Carmel.</i>	West College

SUMMARY.

The Fourth Form	14
The Third Form	8
The Second Form	9
Students Pursuing Select Studies.....	3

Total in the Academy.....34

Students enrolled in other departments of the University who receive instruction in the Academy classes:

Greek	7
Latin	11
Mathematics	9
Science	4

31

Total receiving instruction in Academy classes...65

COURSES OF STUDY.

The Academy is designed to fit pupils for College, for Teaching, or for Business. It offers three Courses of Study.

I. The Classical Course extends through four years and is arranged to meet the requirements for admission to College. The Study of Latin begins with the First Form and continues for four years and two terms. The Study of Greek begins with the Third Form and continues for two years and one term. Notwithstanding the time given to these branches of study, fully one half of the entire Course is devoted to English, Historical, Mathematical, and Scientific subjects.

II. The Latin Scientific Course extends through four years and furnishes adequate preparation for either division of the Philosophical Course in College. The First and Second Forms of the Classical and Scientific Courses are identical. In the Third and Fourth Forms, the student preparing for the Latin Division substitutes Historical and Scientific subjects for the Greek of the Classical Course; while the student preparing for the Greek Division substitutes the Greek of the Third and Fourth Forms for the Latin and includes Historical and Scientific subjects.

III. The Scientific Course extends through four years and prepares for the Courses in General Science, in Biology, in Chemistry, and in Civil, Mechanical and Electrical Engineering in College. For the Vergil and the Cicero of the Latin Scientific Course, it substitutes one term of Advanced English, one term of Chemistry, and two years of German.

Students who are able to accomplish more work in the allotted time than is required by the Course may pursue honor work in the Classics by reading, under the instructor's direction, Cæsar's Civil War, Cicero's Letters, or Vergil's Eclogues, and Books IV, V, VI of the Iliad, or the Cyropædia.

Students will be admitted to the Form for which they are prepared.

Students who do not intend to enter College, but who desire a comprehensive academic training, will find the Scientific or the Latin Scientific Course well adapted to prepare them for teaching or for business.

Special classes in History and Literature are maintained to meet adequately the requirements of applicants for examination and registration as students at law, under the rules adopted by the Supreme Court of Pennsylvania.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. CLASSICAL COURSE.

FIRST FORM.

- | | |
|-------------------------------------|----------------------------------|
| I. TERM—Algebra, 5,
Latin, 5, | U. S. History, 5,
English, 5. |
| II. TERM—Algebra, 5,
Latin, 5, | English, 5,
U. S. History, 5. |
| III. TERM—Geometry, 5,
Latin, 5, | U. S. History, 5,
English, 5. |

SECOND FORM.

- | | |
|---|---------------------------------------|
| I. TERM—Higher Arithmetic, 5,
Latin, 5, | Ancient History, 5,
Rhetoric, 5. |
| II. TERM { Bookkeeping,
Commercial Arithmetic, 5,
Latin, 5, | Ancient History, 5,
Rhetoric, 5. |
| III. TERM—Algebra, 5,
Cæsar, 5, | Ancient History, 5,
Literature, 5. |

THIRD FORM.

- | | |
|-------------------------------------|--------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | Greek, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | Greek, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Cicero, 5, | Anabasis, 5,
Literature, 5. |

FOURTH FORM.

- | | |
|------------------------|--------------|
| I. TERM—Geometry, 5, | Cicero, 5, |
| Vergil, 5, | Anabasis, 5. |
| II. TERM—Geometry, 5, | { Ovid, } 5, |
| Vergil, 5, | |
| | Iliad, 5. |
| III. TERM—Geometry, 5, | Iliad, 5, |
| Vergil, 5, | Anabasis, 5. |

II. THE LATIN SCIENTIFIC COURSE.

FIRST FORM.

- | | |
|------------------------|-------------|
| I. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| II. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| III. TERM—Geometry, 5, | History, 5, |
| Latin, 5, | English, 5. |

SECOND FORM.

- | | |
|-------------------------------|---------------------|
| I. TERM—Higher Arithmetic, 5, | Ancient History, 5, |
| Latin, 5, | Rhetoric, 5. |
| II. TERM { | Ancient History, 5, |
| Bookkeeping, | Rhetoric, 5, |
| Commercial Arithmetic, 5, | |
| Latin, 5, | |
| III. TERM—Algebra, 5, | Literature, 5, |
| Cæsar, 5, | Ancient History, 5. |

THIRD FORM.

- | | |
|---|----------------|
| I. TERM—Algebra, 5, | Elocution, 5, |
| Cæsar, 5, | |
| <i>German, 5, or History of England, 5.</i> | |
| II. TERM—Algebra, 5, | Literature, 5, |
| Cæsar, 5, | |
| <i>German, 5, or Civics, 5.</i> | |

- III. TERM—Algebra, 5, Literature, 5,
 Cicero, 5,
German, 5, or Botany, 5.

FOURTH FORM.

- I. TERM—Geometry, 5, *German, 5, or French, 5,*
 Vergil, 5, *or Chemistry, 5,*
 Cicero, 5, *or Physics, 5.*
- II. TERM—Geometry, 5, *German, 5,*
 Vergil, 5, *or French, 5,*
 $\left\{ \begin{array}{l} \text{Cicero,} \\ \text{Ovid,} \end{array} \right\} 5,$ *or Chemistry, 5,*
or Physics, 5.
- III. TERM—Vergil, 5, *German, 5,*
 Solid Geometry, 5, *or French, 5,*
or Chemistry, 5,
or Physics, 5.

III. THE SCIENTIFIC COURSE.

FIRST FORM.

- I. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- II. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- III. TERM—Geometry, 5, History, 5,
 Latin, 5, English, 5.

SECOND FORM.

- I. TERM—Higher Arithmetic, 5, Ancient History, 5,
 Latin, 5, Rhetoric, 5.
- II. TERM $\left\{ \begin{array}{l} \text{Bookkeeping,} \\ \text{Commercial Arithmetic,} \\ \text{Latin,} \end{array} \right\} 5,$ Ancient History, 5,
 Rhetoric, 5.
- III. TERM—Algebra, 5, Literature, 5,
 Cæsar, 5, Ancient History, 5.

THIRD FORM.

- | | |
|-------------------------------------|------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Botany, 5, | German, 5,
Literature, 5. |

FOURTH FORM.

- | | |
|---|---|
| I. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | History of England, 5,
German, 5,
or French, 5. |
| II. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |
| III. TERM—Solid Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |

METHODS OF INSTRUCTION.

The Preparatory Curriculum naturally falls into eight principal lines of study, viz.: English, French, German, Latin, Greek, History, Mathematics, and Natural Science. These combine, in due proportion, the cultural, the disciplinary, and the practical elements of intermediate education. The two great divisions of modern study, the Classical and the Scientific, are accorded adequate and appropriate preparation. The subject, facilities, and methods of the various departments are explained below.

I. THE ENGLISH LANGUAGE.

A thorough grounding in the principles of English Grammar is indispensable to the student's progress in the subsequent language studies. The continuous application of this knowledge in Composition, and the constant comparison with the forms and idioms of the Ancient Languages, prepare the way for the study of elementary Rhetoric, and the appreciative reading of English and American Literature. This work is done in the First Form.

In the Second Form a review in the principles of English Grammar is given, and a practical application of the same, together with rhetorical structure in paragraph writing and composition.

In the Third Form the first term is devoted to the study of Elocution, and the remaining two terms take up the study of Literature. The reading and study of the masterpieces of English and American Literature are maintained by means of daily recitations. The work required is identical with the "Scheme of Uniform Entrance Examinations in English Language and Literature," adopted by the "Association of Colleges and Preparatory Schools of the Middle States and Maryland." It comprises (a) careful reading of representative works of certain authors, as literature; (b) thorough study as to "subject-matter, form and structure" of other selections.

II. THE LATIN LANGUAGE.

The Course includes four and two thirds years of Latin, embracing four books of Cæsar, six orations of Cicero, six books of Vergil, and twelve hundred lines of Ovid, besides a complete Course in Grammar and Composition.

Careful drill is given in the declensions and conjugations, in the use of the moods and the sequence of tenses, in the ready reading of the Latin text, in sight reading and in accurate translations into idiomatic English. Attention is given to the important personal, historical, and political elements in the writings of Cæsar and Cicero. In Vergil, the student is introduced to the poetry, legend, religion, and art of Rome. He is taught to investigate the allegorical, archæological, and mythical allusions of the *Æneid*, and to appreciate it as the mirror of the life of the Empire. Latin prosody is taught first from the text, and then from the grammar.

III. THE GREEK LANGUAGE.

The first two terms of the Third Form are spent in a thorough study of White's First Greek Book. In the third term Xenophon's *Anabasis* is read, and special attention is given to acquiring a vocabulary and to the forms and syntax of nouns, pronouns, and adjectives. In the first half of the Fourth Form the reading of Xenophon is continued. During the last half year Homer's *Iliad* is read, and the difference between the Homeric and Attic Forms is noted. Throughout the Course, Prose Composition is frequently required for the purpose of acquiring a vocabulary and a knowledge of syntax. The Course includes four books of the *Anabasis*, four books of the *Iliad*, besides the Grammar and Prose Composition.

IV. THE GERMAN LANGUAGE.

One year's study of German is required of members of the Third and Fourth Forms of the Scientific Course. The same work may be elected by the members of the corresponding form of the Latin Scientific Course instead of the science subjects of that Course. In the study of German, the aim is a thorough acquaintance with declensions and conjugations; facility of pronunciation; quick recognition of words both by the eye and the ear; as extensive a vocabulary as the time will allow; and by constant practice the laying of a foundation for reading, writing, and speaking the language.

V. HISTORY.

The Course in History includes a survey of the History of the United States, of England, of Greece, and of Rome. The aim is to acquaint the student with the life, the genius, the institutions, and the achievements of the respective peoples, and their part in the wider history of mankind.

Additional Courses are offered in Ancient, Mediæval, and Modern History, and extra Courses in the historical readings required of applicants for examination and registration as students at law by the Supreme Court of Pennsylvania.

VI. MATHEMATICS.

Arithmetic. To students who are fitting themselves for business, a Course is given in practical business Arithmetic, involving all the ordinary problems and practices in the business world. To those who are preparing for college or for teaching, instruction is given in the theory and science of Arithmetic. Pupils are expected to master the principles and then to formulate their own rules.

Algebra. The Third Form course extends through one year, and includes a knowledge of the fundamental principles, Factoring, Divisors, and Multiples, Fractions, Equations, Involution, Evolution, Theory of Exponents, Radicals, and Quadratic Equations. Daily blackboard work serves to apply the principles taught. The student is required both to know the methods of the solution of problems and also to explain the operation to the class.

The First Form takes up Algebra for the first two terms. The work is intended to give the pupils a knowledge of algebraic principles and to assist them in their Arithmetic. The third term is devoted to Concrete Geometry and Mechanical Drawing.

Plane and Solid Geometry. The instruction consists in daily recitations for three terms on the Theorems and Problems given in the text-book, with original demonstrations of propositions by the students from hints and figures given in the classroom. Besides this, considerable attention is given to the solution of original Propositions, and the application of principles thus learned to the solution of numerical problems.

Bookkeeping. A practical introduction to the science of accounts is secured in the term devoted to mastering the principles of Double Entry Bookkeeping. Careful attention is given to business forms, to the usages of Banks, and to the elements of Commercial Law. The subject may be pursued in its more extended and intricate application, as an elective, by properly qualified students.

VII. SCIENCE.

Botany is taught by text-books, field exercise, plant analysis, and weekly lectures. A brief outline is first obtained of plant structure, physiology, growth and reproduction. The subject is then re-

viewed by daily drill in analyzing, recording, classifying, and preserving specimens. The recorded analysis of fifty plants is required. Lectures explaining special forms of vegetable growth, the flora of this country, the cultivation, uses, and history of plants complete the work.

Physiology. Every effort is made to impart clear ideas of the structure, parts and functions of the human body. Special attention is given to the chemistry of foods, the laws of health, the effects of stimulants and narcotics. Suggestions are constantly made as to poisons and their antidotes, the care of the sick, disinfection and sanitation, and accidents and emergencies. Charts, manikin, and preparations are used in class.

Physics. The student is grounded in the elements of mechanics and physics. The apparatus of the College Laboratory is available for use. The historical beginnings of each subject, and subsequent development, are sketched in brief lectures. No pains are spared to familiarize the pupil with the laws of these sciences, by instruction, experiments, review, and repeated examination. The truth of principles is proved, except where the demonstration involves mathematics of the higher Course in College.

Chemistry. The Course in Chemistry extends throughout the year, and includes General Chemistry and Qualitative Analysis.

(1) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds.

(2) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds.

(3) **Qualitative Analysis.** In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required.

VIII. ORATORY.

Class Exercises. Members of the Fourth Form prepare and deliver one original oration each term. All other students have regular exercises in Composition and Declamation throughout the year. Public exercises are held before the faculty and students of the Academy. Visitors are cordially invited to these exercises.

In addition to the private rehearsals for the work above indi-

cated students in the Third Form receive daily instruction in elocution during the fall term. The Course includes careful drill in the Elementary sounds in Articulation and in Expression; in Analytical Reading, including the Bible and Hymns; and the reading of Shakspeare.

IX. SPECIAL BRANCHES.

Bible Study. The study of the Bible is pursued as a regular weekly recitation throughout the First, Second, and Third Forms, in all Courses of study. A scheme of study is arranged at the beginning of each year. It is intended that the successive schemes for the various years of the Course will cover the Life of Christ, the historical portions of the Old Testament foreshadowing the Christ, and the history of the Apostolic Church.

The Study of Music may be pursued by Academic students in the School of Music.

Drawing. All students of the Academy may receive throughout the year weekly lessons in Free-hand Drawing and Penmanship without extra charge. Special individual instruction in Drawing in the Art Studio is afforded at twenty-four dollars per annum.

X. HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium affords opportunity for physical exercise. The Directors of the Gymnasium give regular class exercises to the students of the Academy. Attendance upon physical training in the Gymnasium is obligatory during the Winter Term.

The Athletic Association of the Academy has been formed to encourage and regulate athletic sports. The Association is allowed to arrange match games with other similar bodies by first securing the consent of the Principal.

PUBLIC EXHIBITIONS.

THIRD FORM.

The Public Exhibition in Declamation by the Third Form will take place on Saturday evening, April 11, 1914, in Bucknell Hall.

FOURTH FORM.

The closing exercises of the Academy will be the Public exhibition in Oratory of the Fourth Form, on June 13, 1914.

Diplomas and Certificates will be conferred Tuesday, June 16, 1914.

GENERAL INFORMATION.

ADVANTAGES.

To the student seeking preparation for College, the Academy offers unusual inducements. Its proximity to the College secures to him an atmosphere of study, acquaintance with the guides and companions of his future Course, and the benefit of numerous literary exercises to be found only in College towns. He has access to the College Library and Reading Room. The Academy is designed to fit pupils thoroughly for College and Technical Schools, and to lay broad and solid foundations for all subsequent scholarly culture and for the successful conduct of everyday affairs.

GOVERNMENT.

Students are encouraged to regard self-government as the only true government. It will be the constant endeavor to secure uprightness of character, gentlemanly deportment, and diligent application to work, by kind treatment, and high standards in conduct and study.

I. ADMINISTRATION.

1. The general control of the Academy is vested in the President of the University.

2. The government of the Academy, subject to such control, rests with the Principal of the Academy.

3. The government of each Hall is vested in the Instructor in charge, who resides in the Hall and enforces regulations for the Hours of Study, Academy Property, Hygienic Precautions, and General Deportment, and such other prudential regulations as may be ordered by the joint concurrence of the President of the University and the Principal of the Academy.

4. Each instructor shall have charge of his classes with reference to attendance upon recitations. He shall report to the Principal cases of non-attendance, and inexcusable failure on the part of students to prepare regular lessons or special work assigned.

II. VIOLATION OF RULES.

1. Any officer of the Institution becoming cognizant of any violation of the regulations by any pupil shall report the same to the Principal of the Academy, who shall make a record of the fact in a book provided for the purpose.

2. Every violation of the laws and prudential regulations of the Academy will subject the offender to a penalty of demerits, graded according to the flagrancy and frequency of the offense.

3. When the sum of a pupil's demerits equals ten it shall be the Principal's duty to notify the parent or guardian of the offender, specifying the offense; for every additional ten demerits like notification shall be made.

4. Additional disciplinary penalties in the form of reprimand, "campus," suspension, dismissal or expulsion, according to the necessities of the case, will follow repeated violations.

BUILDINGS AND ROOMS.

The Academy Buildings are described in detail in the introductory pages of the Catalogue.

The Main Building contains, besides its accommodations for other school and boarding purposes, rooms for students. The rooms are designed to accommodate two students each, and are twenty feet by twelve feet, and fourteen feet high; furnished with new folding beds, washstands, chairs, mirror and table.

The East Hall contains combined study and sleeping rooms, each designed for two students. These rooms are fifteen feet by twelve feet, with high ceilings, and contain two commodious closets and two single wire mattress beds with all necessary furniture.

ARTICLES REQUIRED.

Each student should be provided with an umbrella, overshoes, table napkins, towels, soap, and other articles usually required for personal comfort. All articles for the laundry should be marked with the owner's name.

BOARDING.

All students from a distance will occupy rooms and will board in the Academy, except for reasons jointly satisfactory to the President of the University and the Principal of the Academy.

The Principal and his family, the Instructors, and the Matron live in the building, take their meals with the boarders, and strive in all possible ways to secure the welfare and happiness of the students. The Instructors occupy rooms adjacent to the students' apartments. The appointments of the Dining Room, the character of the table supplies, the household service in general, are designed to furnish the comforts of a first-class boarding house. So far as may be warranted by the deportment of the students, there will be absent from the home life of the school all needless uniformity and irksome limitations, which disregard the reasonable individual preference of pupils.

The Academy gives to furnished rooms daily and complete attention, provides and washes all bedding and bed clothing, and supplies and cares for all lights.

Engagements for board and rooms are expected to continue without change to the end of the school year for which they are made.

APPLIANCES.

The Academy is in possession of excellent apparatus for instruction. A select Reference Library, containing Encyclopedias, Lexicons, Dictionaries, Atlases, and various other helps, is accessible to students at all hours. The Classical Recitation Rooms are provided with Kiepert's Wall Maps of Ancient Geography, and with Reinhard's Album of Ancient Antiquities, mounted. Metric, apparatus, Maps and Globes render assistance in other directions.

The apparatus of the College also is accessible to the classes for purposes of experiment and illustration.

The College Library, numbering thirty thousand volumes, is available for all students.

SCHOOLROOM.

In order to insure favorable conditions of study, the Academy maintains a commodious and well-appointed schoolroom. The school life centers in this room. Here, except when engaged in recitations, day students prepare their work, unless excused for a part of the time, for good cause; here, also, all the younger students of the lower forms prepare for their recitations. Advanced students and those of maturer years, who have acquired habits of independent study, are granted the privilege of preparing part of their work in

their rooms, provided that they maintain high scholarship and excellent deportment.

HOURS.

The time devoted to study and recitation amounts to nine hours every week-day, except Saturday, when it is only two hours. This time should be sacred to its purpose. Parents of day pupils are requested to coöperate with the school in securing attention to evening study hours, and to avoid furnishing occasions or granting excuses for absence.

Students from a distance should be in Lewisburg on the day preceding the opening of each term, and no student should leave until the term has closed. Punctuality in attendance is essential to success in school work.

For terms and vacations, see the Calendar of the University.

STANDING AND PROMOTIONS.

The weekly averages of marks for recitations are recorded, and also failures in conduct and attendance. The scale for such markings ranges from 10, or perfect, to 0, or inexcusable failure. Unexcused absences count as zero.

Monthly and term examinations are held in the studies thus far completed, and term reports of the average in scholarship, attendance, and conduct of each student are sent to parents or guardians by the Principal.

No student is promoted to the next higher class whose grade in any study is less than 7.

Students who complete the Preparatory Courses of Study are admitted to standing in corresponding divisions of the Freshman Class in the College, upon the Principal's certificate, without examination.

All students who complete in a satisfactory manner any of the Courses of Study, and who have sustained irreproachable character during their school residence, shall be entitled to the diploma of the Academy.

Students attaining an average standing of 9 are encouraged to take work additional to the Regular Courses of Study.

PRIZES.

THE HARRY S. HOPPER PRIZE.

Mr. Harry S. Hopper, of Philadelphia, Chairman of the Board of Trustees, offers an annual prize for excellence in Composition.

This prize for 1913 was awarded to Raleigh Milton Felton.

THE DAVID PORTER LEAS PRIZE.

David P. Leas, of Philadelphia, Treasurer of Bucknell University, offers an annual prize to that member of the Third Form who shall excel in the Annual Exhibition of the Third Form in Declamation.

This prize for 1913 was awarded to Raleigh Milton Felton.

THE PRINCIPAL'S PRIZE.

Principal Wilcox offers an annual prize to that member of the Fourth Form who shall pronounce the best oration at the Academic Graduating Exhibition.

This prize for 1913 was awarded to Raleigh Milton Felton.

LITERARY SOCIETY.

This is an organization of students for mutual improvement in literary and oratorical exercises. It has a large and convenient hall in the Main Academy Building, where meetings are held on Friday evenings.

RELIGIOUS SERVICES.

The duties of each day are opened with devotional exercises, which all students are required to attend. Devotional exercises are also held every evening, just before the evening study hour. All academic students residing on the University campus are required to attend these exercises.

Regular attendance at Sunday school and upon public worship at some church on Sunday morning, is required; also upon services on Thanksgiving Day, and the Day of Prayer for Colleges. Attendance upon Christian Endeavor or other like Young People's Society, and the mid-week prayer-meetings, while voluntary, is strongly urged upon students.

Parents or guardians are required to indicate to the Principal the church which they desire their sons or wards to attend.

The Academy students maintain a branch of the Young Men's Christian Association, which holds a weekly prayer-meeting on Tuesday evenings.

EXPENSES OF ACADEMY STUDENTS.

	<i>Per Annum.</i>
Tuition, Board, Furnished Room, Heating, Light, Care, Washing and Incidentals.....	\$290.00
Tuition and Incidentals to day pupils.....	85.00

A student engaging a room is required to make a deposit of ten dollars. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

All charges are payable to the Registrar of the University in advance, at the beginning of each term.

No student is entitled to his place in his class until he has made settlement for the term bills.

An extra charge will be made for washing more than twelve pieces per week.

Students who remain in the Academy during the holiday or spring vacation will be charged at the rate of \$5.00 per week. Table boarders will be charged the regular rate, \$3.50 per week.

Free scholarships covering tuition are provided in all the departments of the University for the children of Ministers of the Gospel *in actual service*. Tuition is rated at \$36 a year.

The expenses for Music and Printing for Exhibition and Anniversary occasions are paid by the classes for which such expenses are incurred.

For information respecting the Academy, address the President of the University, or the Principal, Walter S. Wilcox, Sc.M.

THE INSTITUTE.

INSTRUCTORS AND OTHER OFFICERS.

THOMAS ALPHEUS EDWARDS, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN,
AND INSTRUCTOR IN PSYCHOLOGY AND ETHICS.

MARY GEORGIANA STANTON, PH.B., PRECEPTRESS,
TEACHER OF GERMAN, AND PHYSIOLOGY AND HYGIENE.

MARGARET ELLEN KALP, A.B.,
TEACHER OF LATIN AND HISTORY.

EDITH SCHILLINGER,
TEACHER OF ELOCUTION AND GYMNASTICS.

PAUL GEORGE STOLZ, A.M.,
DIRECTOR OF THE SCHOOL OF MUSIC,
AND TEACHER OF VOCAL MUSIC.

CHARLOTTE G. ARMSTRONG,
VIOLIN AND HISTORY OF MUSIC.

HARRIET MAY HOLLINGSHEAD,
PIANO AND PIPE ORGAN.

MARY ELIZABETH SLEAR,

PIANO AND HARMONY.

HELENA WAY,

TEACHER OF ART.

PERRY AQUILA CARIS, A.B.,

TEACHER OF SCIENCE.

CHENEY KIMBER BOYER,

TEACHER OF GEOMETRY.

EDGAR LLOYD ROGERS,

TEACHER OF ALGEBRA.

DIRECTORY OF THE ALUMNAE.

OFFICERS OF THE ALUMNÆ ASSOCIATION.

President, MRS. MARY WILSON SIMPSON.

Vice President, MISS ELIZABETH BATES.

Recording Secretary, MISS ELBINA BENDER.

Corresponding Secretary, MRS. NANNIE WILSON STEPHENS, Lewisburg.

Treasurer, MISS CHARLOTTE SHIELDS.

Board of Managers,

THE OFFICERS OF THE ASSOCIATION, AND MRS. KATHERINE
B. LARISON, AND MRS. EVELYN STANTON GUNDY.

The Alumnæ Association holds its anniversary on Monday afternoon of Commencement week.

OFFICERS OF THE LEWISBURG ALUMNÆ CLUB.

President, MISS ANNA VAN GUNDY.

Vice President, MRS. NANNIE WILSON STEPHENS.

Secretary, MISS HANNAH B. BUBB.

Treasurer, MRS. ELLEN RUSSELL HAMBLIN.

The Lewisburg Alumnæ Club meets at the Women's College on the second Tuesday of each month during term-time.

OFFICERS OF THE PHILADELPHIA ALUMNÆ CLUB.

President, MISS MARY WOLFE, M.D.

Vice Presidents, MRS. I. H. O'HARRA, MISS HANNAH GOODMAN.

Recording Secretary, MISS LETITIA MATHEWS.

Corresponding Secretary, MISS CATHERINE I. ENGELBERT,
6209 Jefferson Street, Philadelphia.

Treasurer, MRS. DEWEY A. COBB,
648 North 56th Street, Philadelphia.

Historian, MISS MARY STILL, West Chester.

The Dean of the Department for Women will esteem it a favor if any graduate who changes her residence will give notice of her new address. He will also be grateful for any information that will assist in making the directory of the graduates and former students complete.

NAMES OF STUDENTS.

GRADUATES, CLASS OF 1913.

NAME.	RESIDENCE.
EVA ELIZABETH BROWN,	Lewisburg

SENIOR CLASS.

NAME.	RESIDENCE.	ROOM.
KATHERINE CLAYTON,	<i>Lewisburg.</i>	Walker Street
EDITH VIRGINIA FOCHT,	<i>Lewisburg.</i>	South Second Street
BEULAH MAY HUMMEL,	<i>Lewisburg.</i>	North Third Street
ALICE JOHNSON,	<i>Lewisburg.</i>	University Avenue
LEAH LINDIG,	<i>Lewisburg.</i>	North Fourth Street
MARY ELLEN PROWANT,	<i>Lewisburg.</i>	Market Street
HELEN LORAIN SHAFER,	<i>Lewisburg.</i>	South Second Street

FOURTH YEAR CLASS.

MARY MAGDALENE BUBB,	<i>Dalmatia.</i>	South Seventh Street
GRACE LILLIAN CUSTER,	<i>Middleburg.</i>	Women's College
MARY PAULINE DALY,	<i>Dover, Del.</i>	Women's College
HENRIETTA HEINSLING,	<i>Altoona.</i>	Women's College
RUTH PYLES,	<i>Camp Springs, Md.</i>	Women's College
ELIZABETH WARD STEPHENS,	<i>Lewisburg.</i>	South Sixth Street

THIRD YEAR CLASS.

NAME.	RESIDENCE.	ROOM.
HELEN MARGARET ALBRIGHT,	<i>Winfield.</i>	Winfield
NINA MAY BOSWELL,	<i>Lewisburg.</i>	South Third Street
MAY ANGELINE EVERITT,	<i>Vicksburg.</i>	Vicksburg
GRACE KATHERINE EVERITT,	<i>Vicksburg.</i>	Vicksburg
CATHERINE STOUT HEINEN,	<i>Milton.</i>	Milton

FIRST YEAR CLASS.

EDITH CRANE,	<i>Milton.</i>	Milton
JOY TILLMAN PROSS,	<i>Lewisburg.</i>	Market Street

PURSUING SELECT STUDIES.

FLOSSIE E. CLARK,	<i>Sunbury.</i>	Market Street
DARLE FAYE DAVIS,	<i>Allenwood.</i>	Allenwood
HENRIETTA MCCARTY,	<i>Allenwood.</i>	Allenwood
AMY COLLINS HINCHMAN,	<i>Haddonfield, N. J.</i>	Women's College
ANNA LAURA HOLDEN,	<i>Corsica.</i>	Women's College
BERTHA MAY MCCAULEY,	<i>Brockwayville.</i>	Women's College
EVA AUGUSTA REINHARDT,	<i>Taylor.</i>	Women's College

SUMMARY.

Senior Class	7
Fourth Year Class.....	6
Third Year Class.....	5
First Year Class.....	2
Pursuing Select Studies.....	7
Total.....	27

STUDENTS IN ELOCUTION.

NAME.	RESIDENCE.
JENNIE ALENA BIRTH,	Nescopeck
ISABEL FRANCIS BOND,	Lewisburg
MARY ADELINE BYERS,	Milton
EDGAR CARLTON CAMPBELL,	Shunk
FLOSSIE E. CLARK,	Sunbury
OLIVE COOPER,	Montour Falls, N. Y.
JEANNETTE COOKE,	Haddonfield, N. J.
RACHAEL MIRIAM DAVIS,	Woodstown, N. J.
ANNE KALER DREISBACH,	Lewisburg
WILLIAM HENRY EYSTER,	Lewisburg
MAE NASH EVANS,	Yonkers, N. Y.
RALEIGH MILTON FELTON,	Connellsville
CARRIE DUNBAR FORESMAN,	Lewisburg
MARY ELLA FREED,	Williamsport
FLORENCE GRACE GOOD,	Eldorado
HELEN MARGARET GROFF,	Washington, N. J.
SARA M. HAGGERTY,	Nauvoo
MARIE ELIZABETH HARER,	Blossburg
HENRIETTA HEINSLING,	Altoona
AMY COLLINS HINCHMAN,	Haddonfield, N. J.
EDITH MCCLONG HORTON,	Millville, N. J.
JOSEPH EARL MALIN,	Frazer
BERTHA MAY MCCAULEY,	Brockwayville
GEORGIANA MOORE,	Altoona
DATON LEO RANCK,	New Columbia
KATHERINE ELIZABETH REDELIN,	Freeland
ANNA LOIS REYNOLDS,	Clintondale, N. Y.
EDWARD JOHN RICHARDS,	Homestead
LOIS EDNA SMITH,	Milton
ELIZABETH SPYKER,	Lewisburg
NELLE STEPHENS,	Sunbury
GRACE ISABEL SUTTON,	West Newton
BESSIE MAY WALKER,	Lewisburg
RUTH WILLIAMS,	Parsons
VIRGINIA BLANCHE WOODS,	Washington

Students in Elocution, 35.

STUDENTS IN ART.

SARA GRAY BARNITZ,	Mifflinburg
KATHERINE BECKLEY,	Lewisburg

NAME.	RESIDENCE.
FLOSSIE E. CLARK,	Sunbury
HILDA BELLE CORNELIUS,	Sunbury
ANNE KALER DREISBACH,	Lewisburg
ELLEN WOLFE FOCHT,	Lewisburg
MARIAN KATHRYN HARMAN,	Montoursville
ANNE LAURA HOLDEN,	Corsica
CAROLYN HOPPER,	Lewisburg
ELLA LAWSHE,	Lewisburg
BERTHA MAY McCAULEY,	Brockwayville
MARY ELIZABETH SLEAR,	Sunbury

Students in Art, 12.

COURSES OF STUDY.

The Bucknell Institute offers to young women three courses of study, the General, the Classical, and the Scientific. The General Course extends over five years, leading to a diploma which admits to advanced standing in college. Students are admitted to advanced standing, if upon examination they are found to have satisfactory knowledge of the branches which the class they propose to enter has already completed.

Credentials are accepted in the studies of the First, Second and Third Years from schools whose curricula are equivalent to that of Bucknell Institute; also from accredited private teachers, in studies which are *continued* after entrance.

The Classical and the Scientific Courses offer thorough preparation for the Freshman Class in College. Graduates of accepted high schools, with a four years' Course, are admitted to the General Course and graduated with diploma and medal upon completion of the year's work. This work may be chosen in English, French, German, Latin, Mathematics, History, Pedagogy, Science, or Domestic Economics. The work will be taken under college professors, and will be accepted for a college degree if the student wishes to pursue further study. This arrangement is designed to meet the needs of the large number of young women who after graduating from high school wish to pursue some special line of work, but for various reasons do not wish to take a four-year College Course.

I. THE GENERAL COURSE.

The General Course embraces, in MATHEMATICS, Arithmetic, common and advanced, Algebra and Geometry, plane and solid, and Higher Algebra with Trigonometry and Analytical Geometry as electives; in LATIN, four years; in GERMAN, two years, and a third year elective with FRENCH; in FRENCH, one year; and in ITALIAN and SPANISH, an optional course; in SCIENCE, Physical Geography, Botany, Physics, Physiology, Chemistry. In these branches the students have the advantages afforded by the College Observatory,

Laboratory, and Museum. The Course also includes Rhetoric, Composition, Civil Government, Psychology, Ethics, and History of Art.

Special attention is given to History and Literature, to the former of which six and to the latter of which three terms are devoted, besides the reading of English and American authors required for admission to College.

Attention is also given to preparation of the student for home-making, and for the study of Domestic Science, Household Art, Hygiene and Sanitation.

II. THE CLASSICAL COURSE.

The Classical Course embraces, in MATHEMATICS, Algebra, Geometry, plane and solid; in LATIN, Grammar and Composition, Cæsar, Vergil, Cicero's Orations, Ovid, in all four years; in GREEK, Grammar and Composition, Xenophon's Anabasis, Homer's Iliad, in all two years; in HISTORY, General History, and Greek and Roman History.

Students who complete the Classical Course are admitted to the Freshman Class in College as candidates for the first degree in Arts.

III. THE LATIN SCIENTIFIC COURSE.

The Latin Scientific Course corresponds to the Classical Course except that scientific subjects are substituted for the first two years of Greek.

Students who complete the Latin Scientific Course are admitted to the Freshman Class in College as candidates for the first degree in Philosophy.

Students who complete the Classical or Latin Scientific Course are granted diplomas of graduation.

Students who do not wish to pursue a Course of study may elect such subjects in connection with recitations of the regular classes as they may be qualified to pursue.

AGE REQUIREMENTS FOR ADMISSION.

The required age for admission to the first-year class or to pursue select studies is twelve years, and a proportionate increase of age for admission to advanced classes.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. THE GENERAL COURSE.

FIRST YEAR.

- | | |
|--|--------------------------|
| I. TERM—Algebra, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |
| II. TERM—Algebra, 5,
Latin, 5,
Drawing, 5, | English, 4,
Bible, 1. |
| III. TERM—Geometry, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |

SECOND YEAR.

- | | |
|--|--|
| I. TERM { Commercial Arithmetic, 5,
Business Forms,
Cæsar, Introduction, 5,
Ancient History, 5, | Rhetoric, 4,
Bible, 1. |
| II. TERM—Bookkeeping, 5,
Cæsar, 5, | Ancient History, 5,
Literature, 4,
Bible, 1. |
| III. TERM—Physical Geography, 5,
Cæsar, 5,
Ancient History, 5, | Literature, 4,
Bible, 1. |

THIRD YEAR.

- | | |
|------------------------|----------------|
| I. TERM—Algebra, 5, | Elocution, 4, |
| Cæsar, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| History of England, 5, | |
| II. TERM—Algebra, 5, | Literature, 4, |
| Cicero, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| Civics, 5, | |
| III. TERM—Algebra, 5, | Literature, 4, |
| Cicero, 5, | Bible, 1. |
| German, 5, <i>or</i> | |
| Botany, 5, | |

FOURTH YEAR.

- | | |
|-----------------------|-------------------------|
| I. TERM—Geometry, 5, | German, 5, <i>or</i> |
| Vergil, 5, | Chemistry, 5, <i>or</i> |
| Cicero, 5, | Physics, 5. |
| II. TERM—Geometry, 5, | German, 5, <i>or</i> |
| Vergil, 5, | Chemistry, 5, <i>or</i> |
| { Cicero, } 5, | Physics. |
| { Ovid, } | |
| III. TERM—Vergil, 5, | German, 5, <i>or</i> |
| Geometry, | Chemistry, <i>or</i> |
| | Physics. |

SENIOR YEAR.

- | | |
|------------------------|-----------------|
| I. TERM—Psychology, 5, | Bible, 1, |
| Rhetoric, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Solid Geometry, 5, | |
| Physiology, 5, | |

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|---------------------------------|-----------------|
| II. TERM—English Literature, 5, | Bible, 1, |
| Child Psychology, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Algebra, 5, | |
| Physiology, b, 5, | |
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- | | |
|-------------------------|-----------------|
| III. TERM—Ethics, 5, | Bible, 1, |
| American Literature, 5, | Composition, 1, |
| French, 5, | Elocution, 1. |
| German, 5, | |
| Trigonometry, 5, | |
| Physiology, c, 5, | |

Senior students select with the approval of the Dean three major subjects, in the Senior year, General Course.

II. THE CLASSICAL COURSE.

FIRST YEAR.

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|---------------------|-------------|
| I. TERM—Algebra, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |
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- | | |
|----------------------|-------------|
| II. TERM—Algebra, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |
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- | | |
|------------------------|-------------|
| III. TERM—Geometry, 5, | English, 4, |
| Latin, 5, | Bible, 1. |
| History, 5, | |

SECOND YEAR.

- | | | |
|-----------|---------------------------|--------------|
| I. TERM { | Commercial Arithmetic, 5, | Rhetoric, 4, |
| | Business Forms, | Bible, 1. |
| | Cæsar, Introduction, 5, | |
| | Ancient History, 5, | |

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|--|--|
| II. TERM—Bookkeeping,
Business Forms,
Cæsar, 5, | Literature, 4,
Bible, 1.
Ancient History, 5, |
| III. TERM—Physical Geography, 5,
Cæsar, 5,
Ancient History, 5, | Literature, 4,
Bible, 1. |

THIRD YEAR.

- | | |
|--|-----------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5,
Greek, 5, | Elocution, 4,
Bible, 1. |
| II. TERM—Algebra, 5,
Cicero, 5,
Greek, 5, | Literature, 4,
Bible, 1. |
| III. TERM—Algebra, 5,
Cicero, 5,
Greek, Anabasis, 5, | Literature, 4,
Bible, 1. |

FOURTH YEAR.

- | | |
|--------------------------------------|--|
| I. TERM—Geometry, 5,
Vergil, 5, | Cicero, 5,
Greek, Anabasis, 5. |
| II. TERM—Geometry, 5,
Vergil, 5, | { Cicero, }
{ Ovid, } 5,
Iliad, 5. |
| III. TERM—Geometry, 5,
Vergil, 5, | Iliad, 5,
Anabasis, 5. |

III. THE LATIN SCIENTIFIC COURSE.**FIRST YEAR.**

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|---|--------------------------|
| I. TERM—Algebra, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |
|---|--------------------------|

II. TERM—Algebra, 5,	English, 4,
Latin, 5,	Bible, 1.
Drawing, 5,	

III. TERM—Geometry, 5,	English, 4,
Latin, 5,	Bible, 1.
History, 5,	

SECOND YEAR.

I. TERM {	Commercial Arithmetic, 5,	Rhetoric, 4,
	Business Forms,	Bible, 1.
	Cæsar, Introduction, 5,	
	Ancient History, 5,	

II. TERM {	Bookkeeping,	Ancient History, 5,
	Commercial Arithmetic, 5,	Literature, 4,
	Cæsar, 5,	Bible, 1.

III. TERM—Physical Geography, 5,	Literature, 4,
Cæsar, 5,	Bible, 1.
Ancient History, 5,	

THIRD YEAR.

I. TERM—Algebra, 5,	Elocution, 4,
Cæsar, 5,	Bible, 1.
German, 5, <i>or</i>	
History of England, 5,	

II. TERM—Algebra, 5,	Literature, 4,
Cicero, 5,	Bible, 1.
German, 5, <i>or</i>	
Civics, 5,	

III. TERM—Algebra, 5,	Literature, 4,
Cicero, 5,	Bible, 1.
German, 5, <i>or</i>	
Botany, 5,	

FOURTH YEAR.

I. TERM—Geometry, 5,	German, 5, <i>or</i>
Vergil, 5,	Chemistry, 5,
Cicero, 5,	Physics.

- | | |
|--|--|
| II. TERM—Geometry, 5,
Vergil, 5,
{ Cicero, } 5,
{ Ovid, } | German, 5, <i>or</i>
Chemistry, 5, <i>or</i>
Physics, 5. |
| III. TERM—Geometry, 5,
Vergil, 5, | German, 5, <i>or</i>
Chemistry, <i>or</i>
Physics. |
-

IV. THE COURSE IN DOMESTIC SCIENCE.

FIRST YEAR.

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|--|--|
| I. TERM—Chemistry, 5,
General Physiology, 5,
Cookery { Principles, 1,
Practice, 5, | English Language, 1,
Physical Training, 2. |
| II. TERM—Chemistry, 5,
Personal Hygiene, 5,
Cookery { Principles, 1,
Practice, 5, | English Language, 1,
Physical Training, 2,
Mechanical Drawing, 1. |
| III. TERM—Chemistry, 5,
Home Nursing and Emer-
gencies, 5,
Cookery { Principles, 1,
Practice, 4, | English Language, 1,
Physical Training, 2,
Domestic Architecture, 1. |

SECOND YEAR.

- | | |
|--|---|
| I. TERM—Chemistry of Foods, 5,
Biology, 5,
Cookery { Principles, 1,
Practice, 4,
Psychology, 4, | English Language, 1,
Physical Training, 2,
Methods of Teaching Do-
mestic Science, 1. |
| II. TERM—Chemistry of the Household, 3,
Cookery, 5,
Dietetics and Domestic Sani-
tation, 5,
Child Psychology, 5, | English Language, 1,
Physical Training, 2,
Invalid Cookery, 1,
Methods of Teaching, 1. |

III. TERM—Cookery, 5,	English Language, 1,
Bacteriology, 5,	Physical Training, 2,
Child Psychology, 5,	Methods of Teaching, 1,
	Household Manage- ment, 2.

Certificates of graduation are granted to students who complete the Domestic Science Course.

METHODS OF INSTRUCTION.

I. PSYCHOLOGY AND ETHICS.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Child Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Physiological Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

The aim in the Course in Ethics is to make the instruction as practical as possible. Theses on problems in Ethics are required of each student taking the subject, in addition to recitations from text-books.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology and Ethics are open as electives to College women.

II. PHYSIOLOGY.

The Course in Physiology, with special reference to Domestic Science, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on. The Course then enters upon the subject of Domestic Sanitation—house location, soil, water, air, light, drains, cellars, and so on; plumbing, ventilation, sources of water supply, disinfection after contagious diseases, and so on.

III. CHEMISTRY.

Descriptive Chemistry is taught by text-books, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the student in writing formulæ and solving chemical equations. To accomplish this, each student will be expected to spend at least five hours each week in the Laboratory, studying the characteristics and reactions of the elements and their compounds, and performing the experiments outlined in the text and lectures. Notes will be kept by each student, describing the experiment and giving the equation which represents the reaction taking place.

The Course in Chemistry extends as a major throughout the year. It is taught with especial reference to domestic science. It treats especially of applications to daily life in the household, air, water, detergents, food materials.

IV. DOMESTIC SCIENCE.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To prosecute the work of this Course effectively, the student should have the equivalent of the usual four-year High School Course.

The Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

A course of lectures open to all students in the Women's Department is given by specialists without charge.

V. LITERATURE AND ART.

LITERATURE is taught by topical outlines, the elaboration of which depends upon a sympathetic study of the masterpieces in connection with the lives and times of the writers. The subject is so presented that a vital experience results rather than an empty form of knowledge. The object of the Course is to cultivate and ennoble the emotions, to stimulate the imagination, and to reinforce the will with strong and exalted motives.

(a) The Advanced Course in Rhetoric consists of daily themes, recitations, and consultations.

(b) English Literature is designed to give a general knowledge of the history of English literature from the Elizabethan to the Victorian periods, inclusive.

(c) American Literature is given with special reference to the national period.

THE HISTORY OF ART is offered in the Senior Year, General Course. The aim of the Course is to give a general knowledge of the development of art and to lead to an acquaintance with individual artists and their work. Some attention is given to the theories concerning the origin of the art-impulse itself, and the law of the mental evolution which has governed the history of art.

A full Course in HOUSEHOLD ART is offered by the Art Department.

VI. HISTORY.

History. Six terms are devoted to this study. The Course embraces General History, the History of the United States, of England, of Greece, and of Rome. Efforts are made to show the learner that History is not mere facts in chronological order, but a record of the development of civilization.

Civil Government. The origin and growth of our institutions, the functions of the various departments of the National, State, and local governments, the political history of the people, the interpretation and construction of the Constitution, are discussed.

VII. THE ENGLISH LANGUAGE.

Rhetoric is taught as a practical aid to English Composition. Daily exercises in composition are required.

English Composition is required throughout the Course. Classes in Composition meet weekly for general criticism and the assignment of work. One essay is required from each student monthly, and an exercise in rapid and concise writing is required weekly.

VIII. THE LATIN LANGUAGE.

Paradigms of Declension and Conjugation with the Principles of Syntax, are introduced gradually, after many illustrations. English sentences are translated into Latin, readiness in Latin Composition and a correct style being thus acquired.

The following Courses are offered: 1. Latin Grammar and Lessons; 2. Eutropius; 3. Cæsar, Gallic War; 4. Vergil, *Æneid*; 5. Cicero, Orations; 6. Ovid.

IX. THE GREEK LANGUAGE.

The first half of the Third Year is spent in acquiring sufficient knowledge of forms and inflections to commence the study of Xenophon's *Anabasis*. During the last half year, special attention is given to the inflection and syntax of nouns, pronouns, and adjectives. The reading of Xenophon is continued in the first term of the Fourth Year, and the forms and syntax of verbs made a special study. Homer is then read for one term and a half, and the difference between Homeric and Attic forms is noted. During the last half term Xenophon is reviewed, that the student may refresh her knowledge of Attic Greek, and may not find her transition to College needlessly difficult. Almost daily drill is given in turning into Greek, sentences based on the text of Xenophon.

The following Courses in Greek are offered to students in the Classical Course: 1. Greek Lessons; 2. Xenophon's *Anabasis*; 3. Homer's *Iliad*.

X. MODERN LANGUAGES.

1. French, Italian, and Spanish. The modern languages are taught by comparing them with the mother tongue of the pupil, if there be any relation between them. If there is none, they are compared with the Latin and Greek languages. In French, rules are taught by which the words that are not exactly the same in the two languages are easily made into French.

French Syntax is taught by examples and illustrations from

readings. The grammar is taught from the language, and not the language from the grammar.

As far as practical only French is spoken in the classroom. Extracts are read from the best French literature. Conversations are held in French on the readings, stories are related, and compositions prepared in French by the pupil.

The aim is to teach the modern languages so that they can be spoken correctly.

The same method is used in teaching Spanish and Italian.

2. German. In the study of German the aim is to get knowledge of the language in an all-round way. This is accomplished not alone through the study of grammar and the translation of German into English, but by daily practice in conversation, the committing to memory of poems and idioms, and through an acquaintance with biography and the different phases of German life. As little English as practicable is used in the classroom. Throughout the course there is constant sight reading, translation at hearing, and translation from English into German.

The reading of the second year includes the best German authors studied in connection with Keller's History of German Literature.

XI. MATHEMATICS.

Commercial Arithmetic. Two objects are considered in teaching the subject; first, to give the student a practical knowledge of all ordinary business problems and calculations; second, to develop her ability to think logically and rapidly. The memorizing of rules and mechanical processes is not required, but independent thought, logical analysis and neatness, clearness and accuracy in all written work are demanded.

Business Customs. A practical course in business records, involving the use of the cash book, the ledger, the day-book, etc. Students are required to make out bills and receipts, to use check books, and to make deposits in bank, using the proper forms. This practical work is supplemented by lectures on commercial banks, savings banks and building loan associations, insurance, mortgage and bond investments, and letters of credit.

Elements of Algebra. Three terms are given to this subject. There is thorough drill in the fundamental operations, and the idea that these are simply the applications of arithmetical processes to symbols of general value is kept constantly in mind. The

Course includes Quadratic Equations, Theory of Exponents, Variation, and Series.

Geometry. The Course includes Plane and Solid Geometry. Besides the demonstrations of Theorems given in the text-book, original demonstrations and the solution of problems are required.

XII. SCIENCE.

Physics. The student is thoroughly grounded in the elements of mechanics and physics. The historical beginnings of each subject, and subsequent developments, are sketched in brief lectures. No pains are spared to familiarize the pupils with the laws of these sciences by instruction, experiment, review, and repeated examination. The truth of principles is proved, except where the demonstration involves the higher mathematics. The apparatus of the College is available for class use.

Physical Geography lays a broad foundation for subsequent work in all sciences. Special attention is given to the physical features of the United States. Drawings, photographs, colored and relief maps, and specimens from the Museum and field work aid to make the subject clear.

Botany is taught by text-book and field work. A brief outline is first obtained of plant structure, physiology, growth, and reproduction. Lectures explaining special forms of vegetable growth, and the flora of this country, complete the work.

PHYSICAL CULTURE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Institute Gymnasium is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Institute Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

ÆSTHETIC CULTURE.

It is intended that the pupils of the Institute shall have the influence unconsciously received from painting, music, and refined surroundings, as well as direct instruction in Literature, Music, and

Art. Special instruction in Music and Art is given in the schools devoted to those subjects.

SOCIAL CULTURE.

Pupils are trained to observe the usages of good society. Meetings of various organizations for improvement in Literature, Music, and Art and receptions in charge of the pupils add variety to student life. No effort is spared to give the pupils the advantages of a cultured home. The purpose is to develop the social life of the Institution within itself. Students are not permitted, during term-time, to visit in neighboring towns. The number of social functions during the term is limited, and the consent of the Dean must be obtained for each function at least one month before it is to occur.

RELIGIOUS TRAINING.

The Institute is distinctly Christian in its influence. Morning and evening Chapel in the Hall of the Institute building is attended by all students in the Institute Courses, special students, and women pursuing studies in the School of Music. College women living in the Institute attend evening Chapel.

Attendance upon Sabbath school and church services in town is required. All students have weekly recitations in Inductive Bible Study. The students have organized several classes for Scripture Study.

The Young Women's Christian Association, a voluntary society open to the officers and students of the Institute, meets weekly. The regular Tuesday evening prayer-meeting, missionary and temperance work, special Bible Classes, are in charge of this Association.

SPECIAL BRANCHES.

1. Italian and Spanish may be taken up as optional studies.

All optional studies must be pursued in connection with the regular classes.

2. Bible instruction is given once a week throughout the entire Course.

3. Essays are required of all students each month, and themes each week.

4. Two declamations are required of each student during each term.

5. Exercises in either Elocution or Reading are required once a week of all classes.

PUBLIC EXERCISES.

THE EXERCISES OF THE GRADUATING CLASS.

The Commencement Exercises of the Institute are held in the College Commencement Hall on Tuesday afternoon of Commencement week.

THE EXERCISES OF THE FOURTH YEAR CLASS.

The exercises of the Fourth Year Class, a combined musical and literary entertainment, are held in the Chapel of the Institute on the last Saturday evening in the month of April.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Institute, takes place in Bucknell Hall on the second Saturday evening in the month of May.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized in connection with Bucknell Institute an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnae and friends of the Institute. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able.

But for the help of this Association, some of the best of our graduates would have been deprived of the training which has fitted them for the positions they now fill as teachers, authors, missionaries, and pastors' helpers.

During the last twenty-six years seventy-seven young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association; five dollars annually, an Active Member.

Contributions should be sent to the Treasurer, Mrs. John T.

Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katharine B. Larison, Lewisburg, Pa., or Mrs. Calvin A. Hare, Corresponding Secretary, Lewisburg, Pa.

DEPARTMENT OF ELOCUTION.

MISS EDITH SCHILLINGER.

This department is open to all members of the Institute. Its aim is the correct and effective utterance of thought. Special attention is given to Voice Culture, Articulation, including Pronunciation and Expression. Weekly Rhetoricals afford opportunity for platform work. Bible reading and study of Shakspeare have places in the Course. Special Courses are offered to students who wish to take private lessons in elocution. Particular attention is given to curing persons of stammering and other defects in speech.

THE ART DEPARTMENT.

MISS HELENA WAY.

The facilities for the study of Art have been greatly increased by the accommodations allotted to this Department, in a special studio, which provides such adjustments for admission of light, and unencumbered wall surface as to render it adapted for the execution and display of art production.

The Art Department offers a three year Course leading to graduation for persons who wish to take the Art Course for culture, or for teaching or for Household Art. The Courses are varied to suit the requirements of different pupils, but in the amount and quality of work done, and diploma awarded, the Courses are equal.

I. REGULAR COURSE IN ART.

FIRST YEAR.

Drawing—Geometric, common objects and the antique—setting forth the correct principles of perspective, proportion and light and shade.

Mediums—Charcoal, pencil and colored crayons, Nature study, plant analysis and elementary design.

Theory of color—color matching and color harmony.

Construction Work—Paper cutting; raffia and leather.

SECOND YEAR.

Lectures—Principles of design.

Lecture—History of art.

Advanced plant analysis.

Sketches from historic ornament.

Original designs, using geometric, historic and floral motifs, in stencils, oil cloth, linoleums, dress prints, wall paper, rugs, tiles, laces, embroideries, menu and place cards.

Construction—Basketry, tooled leather and pottery.

Instruction in fancy sketches for embroidery purposes.

THIRD YEAR.

Still life, human figure, flowers and landscape.

Mediums—Pastels, water colors and oils.

Lecture—Keramics.

China decorating from original designs, conventional and naturalistic.

Practical instruction in managing the kiln.

Household decoration—plans of homes, displaying correct taste in furnishings.

II. SPECIAL COURSES.

A. ARTS AND CRAFTS.

All work is based on original designs, including stencils, cut and tooled leather, book-binding, pierced and hammered metal, basketry in raffia and reed work, and weaving.

Lectures—Design.

Lectures—Theory of color, color harmony.

Sketches of historic ornament.

KERAMICS.

All work is based on original designs.

Pottery.

China decorating, conventional and naturalistic treatment.

Lectures—History of Keramics and the various styles.

Lecture—Theory of color, color matching and color harmony.

Practical instruction in managing of the kiln.

B. HOUSEHOLD ART.

1. Lectures—Theory of color, color matching, color harmony.

2. History of art.

3. Lectures—Home development from primitive times to our present day homes. Plans of homes in sketch from which one is selected and the student proceeds to express her ideal as to appropriate furnishings for various rooms, including wall and floor coverings, draperies and furniture.

4. Artistic table decoration executed in water colors, with menu and place cards, candle shades, etc.

5. Original design for embroidery articles for the home with instruction in stitches entirely finished according to the laws of harmony.

Special Courses are given to those who want to devote shorter time to the work. Such students may select from the Courses such work as they are competent to take.

Charges for instruction in Art are for all Courses \$12 per term or \$36 per school year.

Special individual instruction in Painting, \$1.00 per lesson.

All bills must be paid to the Registrar of the University, within the first ten days of each term.

Freehand Drawing is a part of the required work of the school without extra charge.

ART EXHIBIT.

On Saturday, Monday, and Tuesday of Commencement week, a display of art products by the pupils of the School of Art is made in the Studio. At this time a committee of Art students receives and entertains all those who visit the Studio.

GENERAL INFORMATION.

ADVANTAGES.

The Bucknell Institute offers to young women superior educational advantages. Its location in a University town assures an atmosphere of study on the benefit of numerous literary exercises, lectures, and addresses. The students in the Institute have the use of the Library and apparatus of the Institute, and also of the College, Astronomical Observatory, Chemical Laboratory, Museum and Library, and the various apparatus of the University. An isolated school could not provide for itself these advantages at a cost of less than a quarter of a million dollars.

During the year 1905 about forty thousand dollars was expended in enlarging and improving the women's buildings.

ADMINISTRATIVE AND OTHER REGULATIONS.

1. The general control of the Women's College, Institute, and School of Music is vested in the President of the University.

2. The government of the Institute, subject to such control, rests with the Dean.

3. Young women, whether attending the College, Institute, or School of Music, are subject to the rules and regulations governing young women attending the Women's College.

RULES.

The laws governing the Women's College are enacted by the Board of Trustees and a copy is given to each student when she enters the Institution.

Any officer of the Institute becoming cognizant of violation of regulations by any pupil shall report the same to the Dean, who shall make a record of the fact in a book provided for the purpose. Any second violation by the same pupil shall be reported to the President of the University; and if, in the judgment of the President of the University and the Dean, the offense be of sufficient gravity, the parent or guardian of the offending pupil shall be notified.

Violations of the regulations of the Women's College or infraction of the laws of morality are punished by private reprimand, deprivation of privileges, or private withdrawal from the Institution.

Summary punishment may be inflicted whenever the interests of the Institution demand it.

PRIZES.

I. BUCKNELL PRIZES.

The following prizes were founded by William Bucknell, of Philadelphia:

1. A First Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

2. A Second Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the second best essay.

For the year 1913 the First Prize of twenty-four dollars was awarded to Jeanette Carolyn Owens.

3. A Third Senior Prize to be awarded to the member of the graduating class who shall attain the highest grade in the studies of the Senior Year. This excludes all grades of studies not in the Senior Year, all Senior Studies taken before the Senior Year, and all studies not taken in the Institute.

For the year 1913 this prize of twenty-five dollars was awarded to Eva Elizabeth Brown.

4. A First Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the best Fourth Year essay.

5. A Second Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the second best Fourth Year essay.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from the following works:

For 1915 Shakspeare's Merchant of Venice, Scott's Marmion, Macaulay's Samuel Johnson, Milton's Comus, L'Allegro, and Il Penseroso.

II. THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1913 the prize was awarded to Bertha May McCauley.

EXPENSES OF INSTITUTE STUDENTS.

I. Boarding Students. The regular charge for Boarding Students in the first four classes is \$290.00 per annum; for students in the Fifth Year General Course, and Domestic Science Course, the charge is \$325.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

Students are charged extra for the washing of dresses, and for the washing of more than twelve pieces per week.

For the rooms in the Bucknell Cottage and in New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students in the first four classes, all courses, amount to \$85.00 per annum; for students in the Fifth Year, General Course, and in Domestic Science Course, the charge is \$140.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing and Painting, and Music will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence on account of sickness.

The expenses for Music, Printing, and other charges ordinarily

incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$5.00.

Free scholarships, covering tuition, are awarded to children of Ministers of the Gospel *in actual service*.

For information respecting the Institute, address the Dean of the Department for Women, Thomas A. Edwards, A.M., or the Registrar of the University.

BUCKNELL SCHOOL OF MUSIC.

INSTRUCTORS.

THOMAS ALPHEUS EDWARDS, A.M.,

DEAN OF THE WOMEN'S COLLEGE.

PAUL GEORGE STOLZ, A.M.,

DIRECTOR. VOICE, SCIENCE OF MUSIC.

CHARLOTTE G. ARMSTRONG,

VIOLIN AND HISTORY OF MUSIC.

HARRIET MAY HOLLINGSHEAD,

PIANO AND PIPE ORGAN.

MARY ELIZABETH SLEAR,

PIANO AND HARMONY.

NAMES OF STUDENTS.

NAME.	COURSE.	RESIDENCE.
SAMUEL ABRAMS,		Milton
	<i>Piano.</i>	
MARION RUTH BANCROFT,		Altoona
	<i>Piano, Harmony, History.</i>	
GRACE BARR,		Shamokin
	<i>Piano.</i>	
HILDA BAUMGARDNER,		Sunbury
	<i>Piano.</i>	
GEORGE THOMAS BENDER,		Lewisburg
	<i>Piano.</i>	
DAVID NATHANAEL BOSWELL,		Lewisburg
	<i>Voice.</i>	
MARY NINA BOSWELL,		Lewisburg
	<i>Voice.</i>	
MYRTLE BELLE BOWSER,		Sunbury
	<i>Voice, Counterpoint, Supervisor's Course.</i>	
CECIL CELINA BOYER,		Vicksburg
	<i>Piano, Voice, History.</i>	
CLARENCE BROBST,		Sunbury
	<i>Voice.</i>	
VIOLA BROTHERS,		Cherry Tree
	<i>Piano, Harmony.</i>	
ETTA ALTHEA BROWN,		Morristown, N. J.
	<i>Piano, Voice, Counterpoint.</i>	
LUCY BROWN,		Lewisburg
	<i>Piano.</i>	
RUTH BROWN,		Lewisburg
	<i>Piano.</i>	
MARTHA ELLA BROWN,		Milton
	<i>Voice.</i>	
LESLIE HARLAND CAMPBELL,		Shunk
	<i>Piano.</i>	
HARRIET MARTIN CARPENTER,		Woodbury, N. J.
	<i>Voice.</i>	

NAME.	COURSE.	RESIDENCE.
FLORENCE CHARLOTTE CRIPPEN,	<i>Piano.</i>	Watsonstown
MARY PAULINE DALY,	<i>Guitar.</i>	Dover, Del.
MARY ETHEL DECKER,	<i>Pipe Organ.</i>	Montgomery
MARTHA HELEN DENT,	<i>Piano, Voice.</i>	Northumberland
VIOLA E. ECKERT,	<i>Voice.</i>	Philadelphia
EDNA EISLEY,	<i>Voice.</i>	Lewisburg
MINNIE IOLA ETZWEILER,	<i>Piano.</i>	Lewistown
MARGARET WASHINGTON EVANS,	<i>Voice.</i>	Plymouth
HARRY SHEIDY EVERETT,	<i>Violoncello.</i>	Lewisburg
MINNIE FASOLD,	<i>Piano.</i>	Sunbury
PAULINE FEGLEY,	<i>Piano.</i>	Lewisburg
EMELINE FISHER,	<i>Piano.</i>	Lewisburg
CHARLES HENRY WASHINGTON FISHER,	<i>Voice.</i>	Ashland
MARY ELLA FREED,	<i>Piano.</i>	Williamsport
NALA WEBB FRIES,	<i>Voice.</i>	Lewisburg
DONALD A. FUSIA,	<i>Piano.</i>	Wilkinsburg
ETHEL BENNET GALLOWAY,	<i>Piano.</i>	Lewisburg
CARRIE MARY JANE GRUGAN,	<i>Piano, Counterpoint, History.</i>	West Milton
SARA M. HAGGERTY,	<i>Piano, Voice.</i>	Nauvoo
VIOLA HAINES,	<i>Piano, Harmony, History.</i>	Winfield
EUDORA REGINA HAMLER,	<i>Voice.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
STANLEY NEWTON HARRIS,	<i>Piano.</i>	Lewisburg
CATHERINE STOUT HEINEN,	<i>Piano.</i>	Milton
HARRIET EDNA HILTY,	<i>Piano.</i>	Vandergrift
AMY COLLINS HINCHMAN,	<i>Piano, Voice.</i>	Haddonfield, N. J.
MATILDA HINE,	<i>Piano.</i>	Lewisburg
MARY EMMA HOFFMAN,	<i>Piano, Harmony.</i>	Milton
ANNA LAURA HOLDEN,	<i>Piano, Harmony, History.</i>	Corsica
HAZEL INNS,	<i>Piano.</i>	Sunbury
MARGARET POLLOCK JACOBS,	<i>Piano, Voice, Harmony, History.</i>	Milton
CATHRYNE BLANCHE JENKINS,	<i>Voice.</i>	Milton
MARY LANGLEY JONES,	<i>Violin.</i>	West Pittston
HAROLD RICHARD KELLY,	<i>Piano.</i>	Titusville
WILMA HARRIETTE SPEERS KNAPP,	<i>Harmony, Supervisor's Course, Voice.</i>	Hawley
HOLMAN KNAUSE,	<i>Piano.</i>	Sunbury
HELEN KRAMER,	<i>Voice.</i>	Watsontown
MAME KRAMER,	<i>Piano, Counterpoint, History.</i>	Muncy
GUY KROMER,	<i>Voice.</i>	Milton
ARTHUR KROUSE,	<i>Violin.</i>	Lewisburg
MARY BELLE LEES,	<i>Guitar.</i>	Juniata
RAMONA LENINGTON,	<i>Violin.</i>	Seranton
SAMUEL HARRISON MARKOWITZ,	<i>Voice.</i>	Wilmington, Del.

NAME.	COURSE.	RESIDENCE.
ELIZABETH LUCILE MCGEE,	<i>Piano.</i>	Parkersburg, W. Va.
JENNIE FOLLMER McLAUGHLIN,	<i>Piano, Counterpoint.</i>	Lewisburg
IRENE MUFFLEY,	<i>Piano.</i>	Turbotville
EDITH O. PETERSON,	<i>Piano, Harmony, History.</i>	Lewisburg
BERTHA PFLEEGOR,	<i>Voice.</i>	Montandon
JOY TILLMAN PROSS,	<i>Piano.</i>	Lewisburg
RUTH PYLES,	<i>Piano.</i>	Camp Springs, Md.
MARTHA RANCK,	<i>Piano, Voice, Harmony.</i>	New Columbia
ALVESTA GEARHART REBER,	<i>Voice.</i>	Lewisburg
JANETTE REED,	<i>Piano, Harmony.</i>	Mifflinburg
MARY ELIZABETH REESE,	<i>Violin.</i>	Landsford
MAY REITZ,	<i>Piano, Voice.</i>	Winfield
EVA AUGUSTA REINHARDT,	<i>Piano, Pipe Organ, Counterpoint.</i>	Taylor
FLORENCE SCOTT,	<i>Piano, Harmony, History.</i>	Milton
RAE SEAMAN,	<i>Piano.</i>	Lewisburg
MYRTLE SHIPMAN,	<i>Voice, Harmony.</i>	Sunbury
ALMA SHOLENBERGER,	<i>Piano, Pipe Organ.</i>	Montgomery
FRANCES SILBERSTEIN,	<i>Voice.</i>	Philadelphia
HELENA RIVERS SNYDER,	<i>Voice.</i>	Mifflinburg
HARRIET A. SOPER,	<i>Voice.</i>	Sunbury
RAYMOND EYLER SPRENKLE,	<i>Voice.</i>	Waynesboro

NAME.	COURSE.	RESIDENCE.
ELIZABETH WARD STEPHENS,	<i>Piano.</i>	Lewisburg
MARY STERNER,	<i>Pipe Organ.</i>	Montgomery
MARGARET MARTHA STUCK,	<i>Piano, Harmony.</i>	Milton
THEO STUCK,	<i>Voice.</i>	Mifflinburg
EDNA TATOR,	<i>Voice.</i>	Milton
RUTH ESPERANCE TATOR,	<i>Voice.</i>	Milton
ELNORA LOUISE TRESCOTT,	<i>Violin.</i>	Berwick
HAZEL IRENE TULE,	<i>Piano, Harmony, History.</i>	Milton
ALFRED SMITH VAN OSTEN,	<i>Voice, Counterpoint, History.</i>	Philadelphia
KATHRYNE WAINWRIGHT,	<i>Piano.</i>	Lewisburg
KATHRYNE WAGNER,	<i>Piano.</i>	Lewisburg
MARGARET WALKER,	<i>Voice.</i>	West Chester
HELENA WAY,	<i>Piano.</i>	Cape May Court House
FLORA BELLE WEDDELL,	<i>Piano.</i>	West Newton
EDNA ALICE WHITTAM,	<i>Piano.</i>	Chester
FRANK F. WHITTAM,	<i>Piano.</i>	Chester
ALETHEA REBECCA WILHELM,	<i>Piano, Harmony.</i>	Sunbury
MADALENE WILHELM,	<i>Piano, Voice, Harmony.</i>	Milton
RUTH WILLIAMS,	<i>Voice.</i>	Parsons
HENRY CHARLES WOLFE,	<i>Violin.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
HELEN EDNA WOMELDORF,	<i>Supervisor's Course and Voice.</i>	Mazeppa
MARIE ANGELA YEISLEY,	<i>Piano, Harmony.</i>	Mifflinburg

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GRADUATES, 1913.

NAME.	RESIDENCE.
ETHEL QUAY CLUSH,	Sunbury
EMMA ELIZABETH KEISER,	Mount Carmel
HELEN WEDEKINDT,	Buffalo, N. Y.

COURSES OF STUDY.

The School of Music is under the general supervision of the Dean of the Department of Women, but has its own corps of instructors, each a specialist in his line. The Courses are designed to afford every needed facility for the study of Vocal and Instrumental Music. An ample supply of instruments from the best makers is provided for practice.

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *Etudes* by Biehl, Lemoine, LeCouppéy, Bertini and Czerny; introductory technical work; Sonatines, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46 and 47; Loeschorn, Op. 66; Czerny, Op. 299; Berens, Op. 61; Easier Mozart, Haydn, Beethoven Sonatas;

Little Preludes by Bach; Bach Inventions, Scales, Arpeggios and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 Studies; Clementi Gradus ad Parnassum; Moscheles, Op. 70; Bach Suites, Handel Suites, Scarlatti pieces Beethoven Sonatas; introductory Chopin work; compositions by Grieg, Godard, MacDowell, Moszkowski and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerto; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Etudes; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements and purposes of each student.

COURSE FOR PIPE ORGAN.

This Course is based upon:

Dudley Buck's Pedal Studies, and upon the works of Rink, Batiste, Lefébure-Wely, Guilmant, and others.

COURSE FOR THE VIOLIN.

The Course is based upon:

The methods of Wohlfahrt, Schubert and others for elementary students; the first part of De Beriot's School; Thirty-six Studies, Kayser; De Beriot's Second and Third Positions; Mazas Etudes Specials; Hermann's One Hundred Studies; Violin School Ovide Musin; Bowing Studies, Casorti; Forty Studies, Kreutzer; Thirty-six Etudes, Fiorilla. Pieces and solos by the best writers for the instrument are used throughout the Course to develop style, phrasing, etc. Sonatas by Beethoven, Gade, Grieg and others, and concertos of Rode and Viotti are required for graduation.

COURSE FOR THE VIOLONCELLO.

Instruction for this instrument is based upon:

Méthode Pratique pour de Violoncello, par S. Lee; studies by Piatti and Romberg.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies, by Campagnoli.

COURSE FOR CONTRABASSO (DOUBLE BASS).

Bottesini's Method.

VOICE CULTURE.

COURSE OF THREE YEARS FOR GRADUATION.

Careful instruction is given in the use of the voice, and the correct manner of producing purity of tone. To secure control over the voice and gain for it flexibility, fullness, and durability, thorough drills are afforded in such technical exercises as:

Lamperti's and Vannuccini's Italian Methods, Vocalises of Sieber, Concione, Lütgen, Vaccai, Bonaldi, Bordogni, Marchesi, and Ponafka; Lamperti's Studies in Bravura Singing. For expression and the development of a pure style, practice is afforded in singing the best English, German, Italian, and French Songs, Operatic Arias and Solos from the Oratorios.

Careful instruction and drill are given in sight-singing; and all students seeking to complete the Course in Voice Culture are expected to acquire reasonable proficiency in this branch of the art of music.

COURSE IN HARMONY.

The study of Harmony is included in the other musical work, and a sound knowledge of its principles is required of all graduates of the School of Music. The text-books used are: Bussler's Harmonic Exercises, Homer Norris's Practical Harmony, Richter's Counterpoint, and Reicha's Course of Musical Composition, or equivalents.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

SUPERVISOR'S COURSE IN PUBLIC SCHOOL MUSIC.

This course provides in a systematic manner the best teaching methods, together with a thorough drill in sight reading, ear training and harmony; also gives actual practice in conducting the classes. In most of the public schools the regular grade teachers instruct the pupils under the supervision of a Supervisor trained for the work. The purpose of this department is training for such supervision; by instructing pupils how to teach others to teach sight-singing.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

TUITION.

Tuition is charged for instruction in music, per annum, as follows:

	<i>Full Course.</i>	<i>Half Course.</i>	<i>Quarter Course.</i>
Vocal	\$80.00	\$45.00	\$25.00
Piano or Organ.....	80.00	45.00	25.00
Violin	80.00	45.00	25.00
Supervisor's Course in Public School Music	80.00	45.00	25.00
Harmony, in private lessons.....	80.00	45.00	25.00
Harmony, in Class.....	25.00	....	....
Guitar and Mandolin, in Class.....	20.00	....	....
Use of Instruments for Practice Two Hours			
Daily	12.00	....	....

Special individual instruction in music, per lesson, \$2.00.

Full course implies two one-hour lessons per week, and theory.

Half course implies two half-hour lessons per week, and theory.

Quarter course implies one-half hour lesson per week, and theory.

No reduction is made except in case of protracted illness.

Instruction in the orchestra and in harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$235 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1913 this prize was divided between Emma Elizabeth Keiser and Helen Wedekindt.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

For information respecting the School of Music, address the Dean of the Women's College, or the Director, Paul G. Stolz, A.M.

UNIVERSITY CALENDAR.

1914.

SPRING RECESS.

Second Term Ends,.....	Wednesday, March 18
Third Term Begins,.....	Wednesday, March 25
Sermon before the Christian Association,.....	Sunday, April 5
Declamation of the Third Form, Academy,.....	Saturday, April 11
Exercises of the Fourth-Year Class, Institute, ..	Saturday, April 18
Contest in Elocution, Institute,.....	Saturday, May 2
Exhibition of the Junior Class, College,.....	Friday, May 8
Examinations,.....	Tuesday to Friday, June 12
Exhibition, School of Music,.....	Friday, June 12
Baccalaureate Sermon,.....	Sunday, June 14
Sermon before the Education Society,.....	Sunday, June 14
Examinations for Admission to College,.....	Monday, June 15
Meeting of the Alumnae of the Institute,.....	Monday, June 15
Annual Meeting of the Trustees,.....	Tuesday, June 16
Annual Meeting of the Alumni,.....	Tuesday, June 16
Graduation of the Fourth Form, Academy,.....	Tuesday, June 16
Graduating Exercises of the Institute,.....	Tuesday, June 16
Oration before the Alumni,.....	Tuesday, June 16
ANNUAL COMMENCEMENT, the 64th,....	Wednesday, June 17

SUMMER VACATION.

Fall Examinations for Admission to College,	Wednesday, September 16
First Term Begins,.....	Thursday, September 17
Election of Class Officers, 3 p. m.,.....	Friday, September 18
Reception by Christian Association,.....	Saturday, September 19
Matriculation,	Tuesday, November 24
Thanksgiving (recess of three days),....	Thursday, November 26
First Term Ends,.....	Wednesday, December 16

1915.

Second Term Begins,.....	Tuesday, January 5
Second Term Ends,.....	Wednesday, March 17
Third Term Begins,.....	Wednesday, March 24

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Franklin Printing Company
Philadelphia

Bucknell University Bulletin.

FOURTEENTH SERIES JANUARY, 1915

No. 4



CATALOGUE

1914=1915



**Published Bi-monthly by the Bucknell University,
Lewisburg, Pennsylvania.**

Entered at the Post Office at Lewisburg, Pa., as Second-Class Matter, July 3, 1901

THE
SIXTY-FIFTH CATALOGUE
OF THE
OFFICERS AND STUDENTS
OF
Bucknell University:
COLLEGE OF LIBERAL ARTS

FOR THE YEAR 1914-15

DEPARTMENTS.

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CALENDAR.

The Winter Term Ends.....	Wednesday, March 17, 1915
The Spring Term Begins.....	Wednesday, March 24, 1915
Annual Commencement.....	Wednesday, June 16, 1915
The Fall Term Begins.....	Thursday, September 16, 1915
The Fall Term Ends.....	Friday, December 17, 1915
The Winter Term Begins.....	Tuesday, January 4, 1916

BUCKNELL COLORS: Orange and Blue.

BUCKNELL YELL: Yah, yah, yoo! Bucknell B. U.!

Wah, hoo, hoo wah, Bang!

PLAN AND PURPOSE OF THE UNIVERSITY.

CORPORATE RIGHTS.

The University was incorporated with full university powers by the Legislature of Pennsylvania, in an Act approved by the Governor on the fifth day of February, 1846. The management of the University is committed to a Board of Trustees, which is self-perpetuating. The trustees are prohibited, for any cause or under any pretext whatever, from encumbering by mortgage or otherwise the real estate or any other property of the institution. It is required by charter that no religious sentiments are to be counted a disability to hinder the election of an individual to any office among the teachers of the institution, or to debar persons from attendance as pupils, or in any manner to abridge their privileges or immunities as students in any department of the University.

BENEFACTORS OF BUCKNELL UNIVERSITY.

The total property of the Institution exceeds one million dollars. The productive investment amounts to over eight hundred thousand dollars. All this property has been given by friends of education, numbering several thousand persons. FOUNDERS of the Institution, that is, Benefactors who have given ten thousand dollars or more have been: DAVID JAYNE, JOHN PRICE CROZER, WILLIAM BUCKNELL, SAMUEL ALRICH CROZER, HARRY SAMUEL HOPPER, HARRIETT BUCKNELL HOPPER, JOHN D. ROCKEFELLER, CATHARINE A. WENTZ, CHARLES MILLER, JOHN J. CARTER, HENRY KIRKE PORTER, DAVID PORTER LEAS, ANDREW CARNEGIE.

PATRONS are those who have given one thousand dol-

lars or more, but less than ten thousand. (The names of Patrons will be published first in the Catalogue for 1917, by which time a complete list may be made up.)

By act of the Board of Trustees, the names of Founders and Patrons will be given in the Annual Catalogue of the University forever.

THE MILLION-DOLLAR MOVEMENT.

The Board of Trustees has authorized an effort to increase the endowment by one million dollars. It is expected to obtain this sum by gifts and legacies.

FORMS OF GIFTS.

To persons wishing to give money for the education of the young, the following forms of beneficence are suggested:

(a) Departments can be endowed for \$100,000 and upward.

(b) Professorships can be endowed for \$50,000 each.

(c) Fellowships can be endowed for \$10,000 each.

(d) Scholarships can be endowed by a gift of \$1,000 to \$5,000 each, the income to be given toward the expenses of the student. The income is estimated from the average income of the funds of the Institution, and is applied only in the year in which it falls due.

(e) Additions can be made to the Loan Fund which has been established. The interest from this is loaned to students, the principal being kept intact. In this way a large, active loan fund accumulates.

(f) A fund for the Retirement of Professors who, after long service, have, through age or infirmity, become unable to render further efficient service.

Each of these forms of beneficence will bear and perpetuate the name of the donor or of the person designated by him.

FORM OF BEQUEST.

To persons desiring to aid in increasing the efficiency of the schools in their work of preparing young men and young women for usefulness, the following form of bequest is recommended :

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the general purpose of said school, according to the Act of Assembly incorporating the same.

Or if for a special purpose :

I give and bequeath to the Bucknell University, at Lewisburg, Pennsylvania, the sum of.....Dollars for the establishment of a department, professorship, fellowship, scholarship, loan fund, or retirement fund, to bear and perpetuate the name of.....forever.

ORGANIZATION.

The University comprises four Schools:

I. THE COLLEGE offers nine Courses of study, each of four years, and each leading to the appropriate degree:

1. The Classical Course.
2. The Philosophical Course.
3. The Course in Jurisprudence.
4. The Course in General Science.
5. The Course in Biology.
6. The Course in Chemical Engineering.
7. The Course in Civil Engineering.
8. The Course in Electrical Engineering.
9. The Course in Mechanical Engineering.

II. THE INSTITUTE for young women has three Courses of study, the General, the Classical, and the Scientific, leading to diplomas which admit to the Sophomore year in College.

III. THE ACADEMY is designed to fit young men for College, either for the Classical, Philosophical, Scientific, or Technological Courses.

IV. THE SCHOOL OF MUSIC has full Courses in instrumental and vocal music, and grants diplomas to those who complete any of the specified Courses.

These schools are one corporation, have one President, who has general charge, with a Principal in more immediate charge of each of the subordinate departments. All expenses are met from funds in the hands of a common treasurer.

THE BOARD OF TRUSTEES.

CHAIRMAN, HARRY S. HOPPER, A.M.,

28 South Third Street, Philadelphia.

SECRETARY, A. JUDSON ROWLAND, D.D., LL.D.,

1701 Chestnut Street, Philadelphia.

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HON. ERNEST L. TUSTIN, LL.D.

CHARLES S. WALTON, A.M.

JOSEPH K. WEAVER, A.M., M.D.

MEETINGS OF THE BOARD.

The annual meeting is held on Tuesday of Commencement Week, at Lewisburg.

The semi-annual meeting is held on the second Thursday in January in Philadelphia.

COMMITTEES OF THE BOARD.

COMMITTEE ON INSTRUCTION

A. JUDSON ROWLAND, D.D., LL.D., *Chairman*.

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DAVID PORTER LEAS, A.M.	MILTON G. EVANS, D.D.
AND THE PRESIDENT.	

THE UNIVERSITY PROPERTY.

I. THE MAIN COLLEGE.

The main College building is situated on a hill one hundred feet above the Susquehanna River, and overlooks scenery of unsurpassed beauty. It was designed by Thomas U. Walter, LL.D., architect of the dome and wings of the Capitol at Washington, D. C., and is in the Grecian style, combining dignity and simplicity. The building has a façade of three hundred and twenty feet. The central portion is eighty feet square, and is strengthened in front by four massive columns. On the first floor are six recitation rooms. On the second floor are the halls of the Theta Alpha and Euepia Literary Societies, Museum of Natural History and Recitation rooms.

In the third story is Commencement Hall, with a seating capacity of fifteen hundred.

The wings on the eastern and western sides, respectively, of the Main Building, are each one hundred and twenty feet in length and four stories in height, and are used for students' rooms.

Several thousand dollars have been expended recently in improving this College building.

II. THE WEST COLLEGE.

The West College was erected in the year 1900. It is constructed of brick, four stories in height, trimmed with brownstone, and contains ninety-seven rooms, one of which is a hall for the use of the Young Men's Christian Asso-

ciation, and the others are designed for the residence of students.

III. THE EAST COLLEGE.

The East College is a building of brick, trimmed with brownstone. The first story is assigned to the Electrical Laboratory and Physical Laboratory, with a floor surface of some thirty-five hundred square feet, and to recitation rooms. The attic story with a floor surface of some six thousand square feet is used for draughting rooms. The other four stories contain one hundred and twelve rooms for students.

IV. THE BUCKNELL HALL.

Bucknell Hall is the Chapel of the College. In it the students of the College meet for worship.

V. THE CARNEGIE LIBRARY BUILDING.

The library building was given by the Honorable Andrew Carnegie, D.C.L., in the year 1905.

The building is sixty-four feet by ninety, built of pressed brick, and trimmed with brownstone. The center, thirty feet by ninety, is used as a reading room. At the height of sixteen feet there is a gallery extending around the room. The sides, each fifteen feet by ninety, are divided on the first floor into rooms for special collections and for offices. The second and third floors will be used for stack rooms. The building will accommodate about one hundred and fifty thousand volumes.

VI. THE OBSERVATORY.

The Observatory was erected in 1887 and enlarged in 1905. It is designed for the use of students in Practical Astronomy.

The equipment represents the latest improvements in astronomical instruments. It consists of a Clark Equatorial Telescope of ten inches aperture and twelve and one half feet focal length, furnished with a fine position Micrometer and all the usual accessories; a Spectroscope with prism and grating by Brashear; a three-inch prismatic Transit, with a thirteen wire movable Micrometer; a Fauth Chronograph with Bond Spring Governor; a Waldo Precision Clock for sidereal time, with mercurial compensation, break circuiting apparatus; Daniell's battery and telegraph sounders; a Seth Thomas Clock for solar time; a Sextant; a three-inch Altitude Azimuth Refractor; a set of Meteorological instruments; Celestial globes and maps, and standard works on Theoretical and Practical Astronomy.

VII. THE CHEMICAL LABORATORY.

The Laboratory is forty-three feet in width and eighty-six feet in length, with two stories above the basement. In the first story, which has a clear height of fifteen feet, are a lecture room, with seating for one hundred and twenty-five students, and a large working room, in which are tables for individual work in Chemical Analysis; the second floor contains a lecture room and rooms for laboratory work in Organic Science; the basement has rooms for Applied Chemistry, and a fireproof room. The attic contains a room for dissection in Human Anatomy.

VIII. THE PHYSICAL LABORATORY.

The Physical Laboratory was erected in 1902. It is a building of two stories, fifty by sixty, constructed of brick trimmed with brownstone. The basement serves for the heating and lighting plant of the institution; the main

story, with one room twenty by fifty and another forty by forty-five, is used for shop work.

IX. THE TUSTIN GYMNASIUM.

The basement of the Gymnasium is built of stone, and contains an office for the director, rooms for students, lockers, dressing rooms, and shower baths. The second story is built of brick, rising twenty-two feet from the main floor to the square, and is open to the roof. At the height of twelve feet a running-track gallery, six feet wide, surrounds the room.

X. THE ATHLETIC FIELD.

The field is conveniently located at the foot of "College Hill," and has been graded and fitted up for outdoor sports. In the northwest corner, at the main entrance to the College grounds, a shaded section has been set aside for tennis. The athletic field is sufficiently large for football, baseball, and lacrosse. A running track, a quarter-mile in length, has been constructed on the eastern part of the campus. The Tustin Gymnasium is located at the end of the field, so as to be near to the center of exercise, and easily accessible to the trainers and students.

XI. THE ACADEMY.

1. **The Main Building** of the Academy is situated on "College Hill," and is fifty feet in width by eighty feet in length, and three stories in height. On the first floor is a dining room, thirty feet by thirty-six feet; two recitation rooms, a reception room, and the Principal's office; on the second floor are suites of rooms for the Principal and his

family and for the Matron. The third floor will be used for a Laboratory of Biology.

2. The East Hall of the Academy is the Bucknell Cottage for young men, and is contiguous to the Main Building and connected with it by a covered passageway. It is of brick, three stories high, sixty feet in length and forty feet in width, and is finished in natural wood. The building contains a general study room, a recitation room, teachers' apartments, and rooms for students. The rooms have high ceilings, large double windows with inside shutters, and two commodious closets each.

Both buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

XII. BUILDINGS OF THE WOMEN'S COLLEGE.

The buildings and campus of this department are set apart for the use of women taking courses in the College, in the Institute, and in the School of Music.

1. The Main Building contains, on the first floor, an office for the Dean and the Registrar, a reception room, the office of the Director of Music, music rooms, recitation rooms, and a dining hall; on the second floor a school-room and a parlor; on the third floor, a library room, teachers' apartments, and students' rooms. The main building was enlarged, 1905, by an addition to the dining hall.

2. The South Hall, erected in 1869, is devoted to students' rooms, except the third story, which is used as a Laboratory for the department of Domestic Science.

3. The Bucknell Cottage stands to the southwest of the Main Building, and is connected with it by an enclosed

passageway. It is built of brick, in the Queen Anne style of architecture, and has dimensions of forty feet by one hundred feet. The interior is finished in natural wood, and is equipped, in matters of light, heat and ventilation, with modern improvements.

The portion allotted to students' rooms affords accommodations for forty occupants. These rooms are in suites on the general plan of a center parlor, with bedrooms and closets on either side. In this building is the **Studio**, a spacious room with such adjustments for the admission of light and supply of unencumbered wall surfaces as adapt it for the execution and display of art products.

4. New Cottage for women, with a front of one hundred and twenty-eight feet and a depth of forty feet, rising three stories above the basement, was erected in 1905. It contains eighty-seven rooms.

The Calisthenium occupies the upper story, and has a floor surface of over four thousand feet.

All the buildings are supplied with hot and cold water, are warmed by steam, and lighted by electricity.

5. The Campus of the Women's College is separated from the main College grounds by Loomis Street.

XIII. HEATING AND LIGHTING PLANT.

A central steam heating and electric lighting plant has been erected; all the rooms, public and private, in the several buildings of the Institution, are warmed and lighted from this plant.

XIV. THE PRESIDENT'S HOUSE.

The Corporation also owns a house for the use of the President of the University.

THE COLLEGE.

THE FACULTY.

JOHN HOWARD HARRIS, PH.D., LL.D., PRESIDENT,
AND PROFESSOR OF PSYCHOLOGY AND ETHICS.

* FREEMAN LOOMIS, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES AND LITERATURE.

WILLIAM CYRUS BARTOL, A.M., PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

FRANK ERNEST ROCKWOOD, A.M., LL.D.,
PROFESSOR OF THE LATIN LANGUAGE AND LITERATURE AND DEAN OF
THE COLLEGE.

WILLIAM GUNDY OWENS, A.M.,
PROFESSOR OF CHEMISTRY.

ENOCH PERRINE, A.M., LITT.D.
PROFESSOR OF THE ENGLISH LANGUAGE AND LITERATURE AND
SECRETARY OF THE FACULTY.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D.,
NEW JERSEY PROFESSOR OF THE GREEK LANGUAGE AND LITERATURE.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
PROFESSOR OF LOGIC AND SOCIOLOGY.

NELSON FITHIAN DAVIS, SC.D.,
PROFESSOR OF BIOLOGY.

* Retired.

EPHRAIM M. HEIM, PH.D.,
PROFESSOR OF ECONOMIC AND POLITICAL SCIENCE.

GUIDO CARL LEO RIEMER, A.M., PH.D.,
PROFESSOR OF MODERN LANGUAGES.

LLEWELLYN PHILLIPS, A.M., D.D.,
JOHN P. CROZER PROFESSOR OF RHETORIC AND ORATORY.

THOMAS ALPHEUS EDWARDS, A.M.,
PROFESSOR OF PEDAGOGY AND DEAN OF THE DEPARTMENT FOR WOMEN.

HENRY THOMAS COLESTOCK, A.M., PH.D.,
PROFESSOR OF HISTORY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND MECHANICAL DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FLOYD GEORGE BALLENTINE, PH.D.,
ASSISTANT PROFESSOR OF LATIN.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNAEUS DRUM, A.M.,
ASSISTANT PROFESSOR OF MATHEMATICS.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

GLENN VINTON BROWN, PH.D.,
PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

BROMLEY SMITH, A.M.,
INSTRUCTOR IN ORATORY AND RHETORIC.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

CHARLES CARPENTER FRIES, A.M.,
INSTRUCTOR IN RHETORIC.

PERRY AQUILA CARIS, A.B.,
INSTRUCTOR IN MATHEMATICS.

HAROLD MURRAY McCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE, SEVENTEENTH JUDICIAL DISTRICT,
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND NOTES AND ON AGENCY.

WILLIAM EMMET MARTIN, A.M., L.H.D.,
LIBRARIAN.

WALTER SAMUEL WILCOX, SC.M.,
REGISTRAR OF THE UNIVERSITY.

FRANK EUGENE BURPEE, A.M.,
SUPERINTENDENT OF BUILDINGS AND GROUNDS.

ADMISSION OF STUDENTS.

TO FRESHMAN STANDING.

1. There must be furnished to the President by the candidate satisfactory testimonials of good moral character, and, if from another college, a certificate of honorable dismissal must be presented. But no student from another college will be admitted except at the beginning of the Academic year.

The required age for admission to the Freshman Class is fifteen years.

2. The requirements for admission to each of the various Courses amount to the work of a High School with a four years' Course. Expressed in units, of a term of twelve weeks, five lessons a week, the requirements for admission to any of the Courses are forty-eight such units, of which thirty-two are required in General for all of the Courses and the remainder vary with the several Courses.

Three of these units are equal to a Carnegie unit.

I. GENERAL REQUIREMENTS.

Candidates for admission to any of the Courses must pass examination in the following:

1. ENGLISH (nine units).

a. Writing from dictation.

b. English Grammar.

c. Elements of Rhetoric—Invention, Style, and Punctuation.

d. A brief composition upon a subject assigned at the time of the examination. No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

e. Reading.—The books set for reading are those designated by the College Association of the Middle States and Maryland. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple

questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books. In preparation for this part of the requirement, it is important that the candidate shall have been instructed in the fundamental principles of Rhetoric.

f. Study and Practice.—This part of the examination presupposes the thorough study of each of the works named by the College Association. The examination will be upon subject-matter, form, and structure.

The candidate is advised to do reading parallel and subsidiary to these books; he is recommended to commit to memory as much English poetry as possible, and to pay close attention to the essentials of Grammar.

2. MATHEMATICS (six units).

a. Algebra, including Quadratic Equations. The requirements in this study include the treatment of Radicals.

b. Plane Geometry.

3. LATIN (six units).

a. Latin Grammar;

b. Latin Prose Composition;

c. Four Books of Cæsar's Commentaries.

4. HISTORY (six units).

a. History of Greece;

b. History of Rome;

c. History of the United States.

5. SCIENCE (four units).

a. Physiology;

b. Physics; or Chemistry.

6. FREE-HAND DRAWING (one unit).

II. PARTICULAR REQUIREMENTS.

A. To enter the Classical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).

- a. Greek Grammar;
- b. Greek Prose Composition;
- c. Greek Reader;
- d. Four Books of Xenophon's *Anabasis*;
- e. Three Books of Homer's *Iliad*.

2. LATIN (seven units).

- a. Seven Orations of Cicero;
- b. Six Books of the *Æneid*;
- c. Ovid, 1200 lines.

B. To enter the Latin division of the Philosophical Course, or the Course in Jurisprudence, the candidate, in addition to the General Requirements, must pass examination in the following:

1. LATIN (seven units).

- a. Seven Orations of Cicero;
- b. Six Books of the *Æneid*;
- c. Ovid, 1200 lines.

2. SOLID GEOMETRY (one unit).

3. Any eight units selected from group E.

2. To enter the Greek division of the Philosophical Course, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GREEK (nine units).

- a. Greek Grammar;
- b. Greek Prose Composition;
- c. Greek Reader;
- d. Four Books of Xenophon's *Anabasis*;
- e. Three Books of Homer's *Iliad*.

2. SOLID GEOMETRY (one unit).

3. Any six units selected from group E.

D. To enter the General Science Course, the Course in Biology, the Course in Chemistry, or the Course in Civil, in Mechanical or in Electrical Engineering, the candidate, in addition to the General Requirements, must pass examination in the following:

1. GERMAN OR FRENCH.

The Grammar of the Language, Composition and Translation at sight of easy prose (three to nine units).

Less than three units, or one year of work, in any language will not be accepted as part of the Entrance Requirements.

2. SOLID GEOMETRY (one unit).

3. Enough units selected from group E to make forty-eight units in all.

E. History of English Literature, History of Modern Europe, History of England, American Civics, Botany, Zoölogy, Physiography, Geology, Astronomy, Chemistry with Laboratory Practice, Physics with Laboratory Practice, High School Agriculture, German, French, Spanish, Italian, Greek, Latin.

ADMISSION ON CERTIFICATE.

Graduates of Bucknell Institute, in any of the General Courses, will be admitted to the Sophomore year of the corresponding Course in the College.

Graduates from Bucknell Academy, in any of the Courses, will be admitted to the corresponding Course in the College upon the Diploma of the Academy.

Graduates of Pennsylvania State Normal Schools are admitted without examination.

Certificates of the College Entrance Examination Board are accepted for admission, and also certificates of the State Board for Examination of Candidates for registration as Students of Law, and Regents' certificates of New York State.

Students who have graduated in a four years' Course of study in Preparatory and High Schools of superior standing may be

admitted upon the certificate of the Principal of the school from which they come without examination upon the subjects specified in the certificate.

All students received upon certificate are regarded as in conditional standing, and will not be matriculated unless their work during the first ten weeks of the term shows that their preparation has been sufficiently thorough.

SPECIAL STUDENTS.

Students who do not desire to take a full regular Course can enter and select special shorter Courses with the sanction of the Faculty; but in all cases, satisfactory examination must be passed upon the subjects required for admission to the Freshman Class of the Course from which they intend to select.

TO ADVANCED STANDING.

I. General Requirements. A proportionate increase of age is required for admission to advanced classes over that required for admission to Freshman standing. Other general requirements are the same as for admission to the Freshman Class.

II. Particular Requirements. Candidates for admission to advanced classes are examined both as for admission to Freshman standing and also on the studies that have been pursued by the class which they desire to enter.

MATRICULATION.

Matriculation gives membership in the College and is a condition precedent to all degrees and honors as well as to honorable dismission. No student is admitted to matriculation until he has shown by his class work during at least ten weeks and by his deportment that he is worthy of membership in the College.

HONORABLE DISMISSION.

No person will be dismissed from the College as in good standing who leaves it while under censure; and papers of dismission given to those leaving while under a condition shall distinctly mention the condition; nor will honorable dismission be granted to any

student who has not discharged all his pecuniary obligations to the Institution. No papers of dismissal or of grades will be granted to a student who has not completed one year of work; nor are credits certified except for work done in class in this College. All certificates of dismissal are signed by the President of the University and sealed with the corporate seal, and no others are valid.

No certificate or statement as to work done in his department is granted by any professor or instructor to an undergraduate.

COURSES OF STUDY.

The Bucknell College offers nine Courses of study leading to degrees in Arts, Philosophy, and Science. Each of the Courses extends through four years. For the Bachelor's degree, thirty-six courses, each of one term five hours a week, must be presented, as well as the prescribed work in oral and written Expression, the former of which extends through two years of the Course and the latter through four years, and also twelve lecture courses.

I. The Classical Course, leading to the degree of Bachelor of Arts, aims to furnish a liberal education in classical and modern Literature, in the Sciences and Arts. Candidates for the degree of Bachelor of Arts must present at least three courses in German or French.

II. The Philosophical Course, with Latin or Greek in each of its two divisions, aims to furnish a thorough training in advanced studies to those who desire to pursue but one of the Ancient Languages. Those who have completed the studies of the Course, including not less than four courses of German or French, are admitted to the degree of Bachelor of Philosophy. But a candidate in the Philosophical Course who offers nine College courses in either of the Ancient Classical languages or nine College courses in a Modern language in addition to the required work in Latin or Greek may receive the degree of Bachelor of Arts.

III. The Course in Jurisprudence, leading to the degree of Bachelor of Arts, covers four years of work in Law, Political Science, Economics, Philosophy, History, Literature, and Mathematics. The Course in Jurisprudence is designed for persons preparing for the legal profession, for a business career, and for participation in public

affairs. No one is graduated from this Course if his average standing for the Course is below nine.

IV. The General Science Course, leading to the degree of Bachelor of Science, is substantially the same as the Philosophical Course, with the substitution of additional Modern Language and Scientific Studies for Latin and Greek. Candidates for the degree of Bachelor of Science must present at least one year of German or French for admission and at least four courses of college work in German or French as requisites for graduation.

V. The Course in Biology, leading to the first degree in Biological Science, covers four years of work in Biology, Chemistry, Physics, Mathematics, and Literature. No one is admitted to the first degree in Biological Science if his average standing for the Course is below nine.

VI. The Course in Chemical Engineering, leading to the first degree in Chemical Engineering, covers four years of work in Chemistry, Physics, Mathematics, Biology, and Literature. No one is admitted to the first degree in Chemical Science if his average standing for the Course is below nine.

The requirements in Modern Language are the same for the Course in Jurisprudence as for the Philosophical Course; and for the Course in Biology and for that in Chemistry they are the same as for the Course in General Science.

VII. The Course in Civil Engineering, leading to the first degree in Civil Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Technology, and Language. No one is admitted to the first degree in Civil Engineering if his average standing for the Course is below nine.

VIII. The Course in Electrical Engineering, leading to the first degree in Electrical Engineering, covers four years of work in Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, and Language. No one will be admitted to the first degree in Electrical Engineering if his average standing for the Course is below nine.

IX. The Course in Mechanical Engineering, leading to the first degree in Mechanical Engineering, covers four years of work in

Pure and Applied Mathematics, Chemistry, Physics, Electro-technics, Steam Engineering, Shop-work, and Language. No one will be admitted to the first degree in Mechanical Engineering if his average standing for the Course is below nine.

X. Advanced Courses in Arts, in Science, and in Engineering have been established, leading to the degrees respectively of Master of Arts, Master of Science, Master of Pedagogy, Civil Engineer, and Electrical Engineer.

The Master's degree is conferred only on condition that the candidate has completed a Course of Liberal study, approved by the Faculty, sufficient in amount to constitute a fifth year of college work, two thirds of which must be in one department. Particulars may be learned by addressing the President.

DOMESTIC SCIENCE.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To prosecute the work of this Course effectively, the student should have the usual four-year High School Course.

The Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

CURRICULA.

Roman numerals indicate the number of class-exercises required each week; when there is no designation, five is understood.

I. THE CLASSICAL COURSE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- | | |
|---|--|
| <p>I. TERM—Solid Geometry,
 Cicero de Senectute and Livy,
 { Odyssey,
 { Greek Prose Composition,</p> | <p>Rhetoric, I,
 Oratory, I.</p> |
| <p>II. TERM—Higher Algebra,
 Livy,
 { Lysias' Orations,
 { Greek Testament,</p> | <p>Rhetoric, I,
 Oratory, I.</p> |
| <p>III. TERM—Trigonometry,
 Velleius and Pliny,
 { Plato's Apology,
 { Greek Testament,</p> | <p>Rhetoric, I,
 Oratory, I.</p> |

SOPHOMORE YEAR.

- | | |
|---|---|
| <p>I. TERM—Rhetoric,
 Horace,</p> | <p>Astronomy, I, or
 History of Art, I,</p> |
| <p>Oratory, I.</p> | |

ELECTIVE STUDIES:

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|--|--|
| <p><i>German,</i>
 <i>French,</i>
 <i>Greek History,</i></p> | <p><i>American History, a,</i>
 <i>Chemistry,</i>
 <i>Surveying,</i></p> |
| <p><i>Analytical Geometry.</i></p> | |

II. TERM—English Literature,
Demosthenes,

Oratory, I.

Astronomy, I, or
History of Art, I,

ELECTIVE STUDIES:

Roman History,
American History, b,
Latin, 6,
German,
French,

Logic,
Chemistry,
Differential Calculus,
Advanced Algebra,
Physiology.

III. TERM—Civics, or Economic History,

History of Art, I.

ELECTIVE STUDIES:

Public Address,
Argumentation,
Juvenal,
German,
French,

Anthropology,
Botany,
Chemistry,
Integral Calculus,
Elements of Law.

JUNIOR YEAR.

I. TERM { Psychology,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

Æschylus and Sophocles,
Latin, 8,
English, 6 or 7,
German,
French,
History, Oriental,
Economics,
Real Property,

Sociology,
Physiological Psychology,
Biology,
Embryology,
Entomology,
Chemistry,
Mechanics,
Geology.

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Advanced Logic,</i>
<i>Latin Poets,</i>	<i>Comparative Psychology,</i>
<i>English, 8,</i>	<i>Zoölogy of Invertebrates,</i>
<i>German,</i>	<i>Animal Histology, a,</i>
<i>French,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English, a,</i>	<i>Higher Analytics,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Contracts,</i>	<i>Municipal Government.</i>

III. TERM—Theism, III,	History of Education, I,
History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Constitutional Law,</i>
<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Cryptogamic Botany,</i>
<i>German,</i>	<i>Bacteriology,</i>
<i>French,</i>	<i>Histology, b,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>Partnership,</i>	<i>Astronomy,</i>
<i>Physics.</i>	

SENIOR YEAR.

I. TERM {	Social Ethics, I,
	Thesis.

ELECTIVE STUDIES:

<i>Greek, 15,</i>	<i>History of Education,</i>
<i>Greek Testament,</i>	<i>School Administration,</i>
<i>Latin, 11,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Comparative Anatomy,</i>
<i>English, 4 or 9,</i>	<i>Chemistry,</i>
<i>German,</i>	<i>Geology,</i>
<i>French,</i>	<i>Geodetic Astronomy,</i>
<i>Medieval History,</i>	<i>Personal Property,</i>
<i>Advanced Ethics.</i>	

II. TERM {	Political Ethics, I,
	Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona,</i>	<i>Philosophy of Mind,</i>
<i>Greek Testament,</i>	<i>History, 11,</i>
<i>Latin, 12,</i>	<i>History of Europe, a,</i>
<i>Roman Life,</i>	<i>Comparative Politics,</i>
<i>Chaucer,</i>	<i>Public Finance,</i>
<i>German,</i>	<i>Chemistry,</i>
<i>French,</i>	<i>Economic Geology,</i>
<i>Psychology of Education,</i>	<i>Human Anatomy, b,</i>
<i>Agency,</i>	<i>Advanced Composition.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Philosophy of Education,</i>
<i>Greek Testament,</i>	<i>History of Europe, b,</i>
<i>Latin, 13,</i>	<i>Private Corporations,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Chemistry,</i>
<i>History of Philosophy,</i>	<i>Forestry,</i>
<i>Railroad Transportation.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

II. THE PHILOSOPHICAL COURSE.

Leading to the Degree of Bachelor of Philosophy.

A. LATIN DIVISION.

FRESHMAN YEAR.

I. TERM—Higher Algebra,	Rhetoric, I,
Cicero de Senectute and Livy,	Oratory, I.
German or French,	
II. TERM—Trigonometry,	Rhetoric, I,
Livy,	Oratory, I.
German or French,	

- III. TERM—Analytical Geometry, Rhetoric, I,
 Velleius and Pliny, Oratory, I.
German or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I, or
 Horace, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, *American History, a,*
French, *Chemistry,*
Greek History, *Surveying.*

- II. TERM—English Literature, Astronomy, I, or
 Oratory, I, History of Art, I.

ELECTIVE STUDIES:

Roman History, *Physiology,*
American History, b, *Chemistry,*
Latin, 6, *Differential Calculus,*
German, *Advanced Algebra,*
French, *Logic.*

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Argumentation, *Anthropology,*
Public Address, *Elementary Law,*
Juvenal, *Botany,*
German, *Chemistry,*
French, *Integral Calculus.*

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 Thesis,

ELECTIVE STUDIES:

Latin, 8, *Economics,*
German, *Physiological Psychology,*
French, *Biology,*
English, 6 or 7, *Entomology,*
History, Oriental, *Embryology,*
Real Property, *Chemistry,*
Sociology, *Mechanics.*

II. TERM { Ethics,
Thesis,

Sanitary Science, I.

ELECTIVE STUDIES:

<i>Latin, 9,</i>	<i>Advanced Logic,</i>
<i>English, 8,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English Bible,</i>	<i>Human Anatomy, a,</i>
<i>History, English, a,</i>	<i>Chemistry,</i>
<i>Municipal Sociology,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Higher Analytics,</i>
<i>Municipal Government,</i>	<i>Physics,</i>
<i>Contracts.</i>	

III. TERM—Theism, III,
History of Philosophy, II,

History of Education, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 10,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Histology, b,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Cryptogamic Botany,</i>	<i>Constitutional Law.</i>

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 11,</i>	<i>History of Education,</i>
<i>German,</i>	<i>School Administration,</i>
<i>French,</i>	<i>International Law,</i>
<i>Anglo-Saxon,</i>	<i>Personal Property,</i>
<i>English, 4 or 9,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Advanced Ethics,</i>	<i>Geology,</i>
<i>Geodetic Astronomy.</i>	

- II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Latin, 12,</i>	<i>Roman Private Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>History of Europe, a,</i>	<i>Economic Geology,</i>
<i>Philosophy of Mind,</i>	<i>Human Anatomy, b,</i>
<i>Psychology of Education,</i>	<i>Agency,</i>
<i>Advanced Composition.</i>	

- III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Latin, 13,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>History of Europe, b,</i>	<i>Forestry,</i>
<i>Bills and Notes,</i>	<i>Railroad Transportation.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

THE PHILOSOPHICAL COURSE.

B. GREEK DIVISION.

FRESHMAN YEAR.

- | | |
|-------------------------|--------------|
| I. TERM—Higher Algebra, | Rhetoric, I, |
| Odyssey, | Oratory, I. |
| German or French, | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| { Lysias' Orations, | Oratory, I. |
| { Greek Testament, | |
| German or French, | |

- III. TERM—Analytical Geometry, Rhetoric, I,
 { Plato's Apology, Oratory, I.
 { Greek Testament,
 German or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Astronomy, I, or
 Greek History, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

American History, a, French,
German, Chemistry,
Surveying.

- II. TERM—English Literature, Astronomy, I, or
 Demosthenes, History of Art, I,
 Oratory, I.

ELECTIVE STUDIES:

German, Logic,
French, Physiology,
Roman History, Chemistry,
American History, b, Differential Calculus,
Advanced Algebra.

- III. TERM—Civics or Economic History, History of Art, I.

ELECTIVE STUDIES:

Argumentation, Elements of Law,
Public Address, Botany,
German, Anthropology,
French, Chemistry,
Integral Calculus.

JUNIOR YEAR.

- I. TERM { Psychology, Sanitary Science, I.
 { Thesis,

ELECTIVE STUDIES:

<i>Æschylus and Sophocles,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>English, 6 or 7,</i>	<i>Entomology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Sociology,</i>	<i>Mechanics.</i>

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>Euripides,</i>	<i>Comparative Psychology,</i>
<i>German,</i>	<i>Zoölogy of Invertebrates,</i>
<i>French,</i>	<i>Animal Histology, a,</i>
<i>English, 8,</i>	<i>Human Anatomy, a,</i>
<i>English Bible,</i>	<i>Chemistry,</i>
<i>History, English,</i>	<i>Mathematics, 9,</i>
<i>Money and Banking,</i>	<i>Physics,</i>
<i>Municipal Government,</i>	<i>Higher Analytics,</i>
<i>Advanced Logic,</i>	<i>Contracts,</i>
	<i>Municipal Sociology.</i>

III. TERM—Theism, III,	History of Education, I,
History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Cryptogamic Botany,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Histology, 6,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>English Bible,</i>	<i>Astronomy,</i>
<i>Partnership,</i>	<i>Physics,</i>
<i>Zoölogy of Vertebrates,</i>	<i>Constitutional Law.</i>

SENIOR YEAR.

I. TERM { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Greek, 15,</i>	<i>Advanced Ethics,</i>
<i>Greek Testament,</i>	<i>History of Education,</i>
<i>Anglo-Saxon,</i>	<i>School Administration,</i>
<i>English, 4 or 9,</i>	<i>International Law,</i>
<i>German,</i>	<i>Personal Property,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Geology.</i>	

II. TERM { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Demosthenes de Corona,,</i>	<i>Psychology of Education,</i>
<i>Greek Testament,</i>	<i>Roman Life,</i>
<i>Chaucer,</i>	<i>Comparative Politics,</i>
<i>German,</i>	<i>Public Finance,</i>
<i>French,</i>	<i>Chemistry,</i>
<i>Philosophy of Mind,</i>	<i>Economic Geology,</i>
<i>History of Europe, a,</i>	<i>Human Anatomy, b,</i>
<i>Agency,</i>	<i>Advanced Composition.</i>

III. TERM—Literature, I, or
Forestry, I.

ELECTIVE STUDIES:

<i>Plato, Phaedo,</i>	<i>Philosophy of Education,</i>
<i>Greek Testament,</i>	<i>Bills and Notes,</i>
<i>French,</i>	<i>History of Europe, b,</i>
<i>German,</i>	<i>Roman Law,</i>
<i>Shakspeare,</i>	<i>Private Corporations,</i>
<i>History of Philosophy,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

III. THE COURSE IN JURISPRUDENCE.

Leading to the Degree of Bachelor of Arts.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Cicero de Senectute and Livy, Oratory, I.
 { Odyssey,
 { Greek Prose Composition,
 or German,
 or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Livy, Oratory, I.
 { Lysias' Orations,
 { Greek Testament,
 or German, or French,
- III. TERM—Analytical Geometry, Rhetoric, I,
 Velleius and Pliny, Oratory, I.
 { Plato's Apology,
 { Greek Testament,
 or German,
 or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Political Science, I,
 Horace, Oratory, I.

ELECTIVE STUDIES:

<i>Greek History,</i>	<i>Surveying,</i>
<i>American History, a,</i>	<i>Chemistry.</i>
<i>German,</i>	

- II. TERM—English Literature, Political Science, I,
 Logic, Oratory, I.

ELECTIVE STUDIES:

<i>Demosthenes,</i>	<i>American History, b,</i>
<i>Quintilian,</i>	<i>German,</i>
<i>Roman History,</i>	<i>French.</i>

III. TERM—Elements of Law, Political Science, I.
 American Constitutional Law,

ELECTIVE STUDIES:

<i>Juvenal,</i>	<i>American Literature,</i>
<i>German,</i>	<i>Argumentation,</i>
<i>French,</i>	<i>Public Address,</i>
<i>Economic History.</i>	

JUNIOR YEAR.

I. TERM—Psychology,	Blackstone, I,
Economics,	Thesis.

ELECTIVE STUDIES:

<i>Real Property, Blackstone B. II,</i>	<i>Latin, 8,</i>
<i>Constitutional Limitations,</i>	<i>Greek Tragedy,</i>
<i>English History,</i>	<i>English Literature,</i>
<i>Sociology,</i>	<i>Modern Language.</i>

II. TERM—Ethics,	Blackstone, I,
Money and Banking,	Thesis.

ELECTIVE STUDIES:

<i>Contracts,</i>	<i>English Bible,</i>
<i>Municipal Government,</i>	<i>Greek,</i>
<i>History,</i>	<i>Latin, 9,</i>
<i>Logic, Course 2,</i>	<i>English Literature,</i>
<i>Modern Language.</i>	

III. TERM—Theism,	Blackstone, I,
Private Corporations,	Thesis.

ELECTIVE STUDIES:

<i>Partnership,</i>	<i>Greek,</i>
<i>English Bible,</i>	<i>Latin, 10,</i>
<i>History,</i>	<i>Modern Language.</i>

SENIOR YEAR.

- I. TERM—International Law, { Social Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Personal Property,</i>	<i>Latin, 11,</i>
<i>Medieval History,</i>	<i>Modern Language,</i>
<i>Anglo-Saxon,</i>	<i>Advanced Ethics.</i>
<i>English Literature,</i>	

- II. TERM—Comparative Politics, { Political Ethics, I,
Thesis.

ELECTIVE STUDIES:

<i>Agency,</i>	<i>Demosthenes de Corona,</i>
<i>Public Finance,</i>	<i>Latin, 12,</i>
<i>Modern Europe, a,</i>	<i>Chaucer,</i>
<i>Philosophy of Mind,</i>	<i>Modern Language,</i>
<i>Advanced Composition.</i>	

- III. TERM—Roman Law, Literature, I.

ELECTIVE STUDIES:

<i>Bills and Notes,</i>	<i>Shakspeare,</i>
<i>Railroad Transportation,</i>	<i>Plato's Phædo,</i>
<i>Modern Europe, b,</i>	<i>Latin, 13,</i>
<i>History, 9,</i>	<i>Modern Language,</i>
<i>History of Philosophy.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

IV. THE GENERAL SCIENCE COURSE.

Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

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| I. TERM—Higher Algebra, | Rhetoric, I, |
| Latin, | Oratory, I. |
| German, 2, or French, | |

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| II. TERM—Trigonometry,
Latin,
German, 3, or French, | Rhetoric, I,
Oratory, I. |
| III. TERM—Analytical Geometry,
German, 4, or French,
Latin, | Rhetoric, I,
Oratory, I. |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric, | Astronomy, I, or
History of Art, I, |
| Oratory, I. | |

ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Greek History,</i>
<i>Horace,</i>	<i>American History, a,</i>
<i>German,</i>	<i>Surveying,</i>
<i>French.</i>	

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| II. TERM—English Literature, | Astronomy, I, or
History of Art, I, |
| Oratory, I. | |

ELECTIVE STUDIES:

<i>German,</i>	<i>Logic,</i>
<i>French,</i>	<i>Physiology,</i>
<i>Roman History,</i>	<i>Chemistry,</i>
<i>American History, b,</i>	<i>Differential Calculus,</i>
<i>Advanced Algebra.</i>	

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| III. TERM—Civics or Economic History, | History of Art, I. |
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ELECTIVE STUDIES:

<i>Public Address,</i>	<i>Elements of Law,</i>
<i>Argumentation,</i>	<i>Anthropology,</i>
<i>Juvenal,</i>	<i>Botany,</i>
<i>German,</i>	<i>Integral Calculus,</i>
<i>French,</i>	<i>Chemistry.</i>

JUNIOR YEAR.

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| I. TERM { | Psychology, | Sanitary Science, I. |
| | Thesis, | |

ELECTIVE STUDIES:

<i>English, 6 or 7,</i>	<i>Economics,</i>
<i>German,</i>	<i>Physiological Psychology,</i>
<i>French,</i>	<i>Biology,</i>
<i>History, Oriental,</i>	<i>Embryology,</i>
<i>Sociology,</i>	<i>Entomology,</i>
<i>Real Property,</i>	<i>Chemistry,</i>
<i>Mechanics.</i>	

II. TERM {	Ethics,	Sanitary Science, I.
	Thesis,	

ELECTIVE STUDIES:

<i>English, 8,</i>	<i>Contracts,</i>
<i>German,</i>	<i>Comparative Psychology,</i>
<i>French,</i>	<i>Zoölogy of Invertebrates,</i>
<i>English Bible,</i>	<i>Animal Histology, a,</i>
<i>History, English,</i>	<i>Human Anatomy, a,</i>
<i>Money and Banking,</i>	<i>Chemistry,</i>
<i>Municipal Government,</i>	<i>Mathematics, 9,</i>
<i>Municipal Sociology,</i>	<i>Higher Analytics,</i>
<i>Physics.</i>	

III. TERM—	Theism, III,	History of Education, I,
	History of Philosophy, II,	Thesis.

ELECTIVE STUDIES:

<i>Greek, 8,</i>	<i>Zoölogy of Vertebrates,</i>
<i>Journalism,</i>	<i>Bacteriology,</i>
<i>German,</i>	<i>Histology, b,</i>
<i>French,</i>	<i>Astronomy,</i>
<i>English Bible,</i>	<i>Physics,</i>
<i>Partnership,</i>	<i>Chemistry,</i>
<i>Cryptogamic Botany,</i>	<i>Constitutional Law.</i>

SENIOR YEAR.

I. TERM {	Social Ethics, I,
	Thesis.

ELECTIVE STUDIES:

<i>Anglo-Saxon,</i>	<i>History of Education,</i>
<i>English, 4 or 9,</i>	<i>Advanced Ethics,</i>
<i>German,</i>	<i>International Law,</i>
<i>French,</i>	<i>Comparative Anatomy,</i>
<i>Medieval History,</i>	<i>Chemistry,</i>
<i>Personal Property,</i>	<i>Geology,</i>
<i>School Administration,</i>	<i>Geodetic Astronomy.</i>

II. TERM { *Political Ethics, I,*
Thesis.

ELECTIVE STUDIES:

<i>German,</i>	<i>Roman Life,</i>
<i>French,</i>	<i>Comparative Politics,</i>
<i>Chaucer,</i>	<i>Public Finance,</i>
<i>Philosophy of Mind,</i>	<i>Chemistry,</i>
<i>Modern Europe, a,</i>	<i>Economic Geology,</i>
<i>History, 11,</i>	<i>Agency,</i>
<i>Psychology of Education,</i>	<i>Advanced Composition.</i>

III. TERM—*Literature, I, or*
Forestry, I.

ELECTIVE STUDIES:

<i>German,</i>	<i>Philosophy of Education,</i>
<i>French,</i>	<i>Bills and Notes,</i>
<i>Shakspeare,</i>	<i>Roman Law,</i>
<i>History of Philosophy,</i>	<i>Private Corporations,</i>
<i>Modern Europe, b,</i>	<i>Chemistry,</i>
<i>Railroad Transportation,</i>	<i>Forestry.</i>

Seniors may take any of the Electives of the Junior Year for corresponding terms.

V. THE COURSE IN BIOLOGY.

Leading to the First Degree in Biological Science.

FRESHMAN YEAR.

I. TERM—Algebra,	Rhetoric, I,
General Chemistry,	Oratory, I
Latin, or German, 2,	
or French,	

- II. TERM—Trigonometry, Rhetoric, I,
 General Chemistry, Oratory, I.
Latin or German, 3,
or French,
- III. TERM—Analytical Geometry, Rhetoric, I,
 Qualitative Chemistry, Oratory, I.
Latin or German, 4, or French,

SOPHOMORE YEAR.

- I. TERM—Rhetoric, Drawing, I,
 Biology, Scientific German, II.
 Quantitative Chemistry,
- II. TERM—Invertebrate Zoölogy, Drawing, I,
 Physiology, Scientific German, II.

ELECTIVE STUDIES:

History, *English Literature,*
Modern Language, *Chemistry,*
Differential Calculus.

- III. TERM—Vertebrate Zoölogy, Drawing, I,
 Botany, Scientific German, II.

ELECTIVE STUDIES:

Chemistry, *Civics,*
Anthropology, *English Literature,*
Integral Calculus, *Modern Language.*

JUNIOR YEAR.

- I. TERM—Psychology, German Biology, I,
 Mechanics, Thesis.
Entomology,
Physiological Psychology,
Organic Chemistry,
- II. TERM—Comparative Psychology, German Biology, I,
 Physics, Thesis.

ELECTIVE STUDIES:

<i>History,</i>	<i>Literature,</i>
<i>Ethics,</i>	<i>Modern Language,</i>
<i>Organic Chemistry,</i>	<i>Human Anatomy, a.</i>

III. TERM—Neurology,	German Biology, I,
Physics,	Thesis.

ELECTIVE STUDIES:

<i>Astronomy,</i>	<i>English Literature,</i>
<i>Theism,</i>	<i>Modern Language.</i>

SENIOR YEAR.

I. TERM—Comparative Anatomy,	{ Social Ethics, I,
Embryology,		Thesis.

ELECTIVE STUDIES:

<i>Geology,</i>	<i>Modern Language,</i>
<i>Economics,</i>	<i>Organic Chemistry,</i>
<i>History.</i>	

II. TERM—Histology,	{ Political Ethics, I,

ELECTIVE STUDIES:

<i>Human Anatomy, b,</i>	<i>History,</i>
<i>Economic Geology,</i>	<i>English Bible,</i>
<i>Money and Banking,</i>	<i>Modern Language,</i>
<i>Chemistry.</i>	

III. TERM—Bacteriology,	Forestry, I.
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ELECTIVE STUDIES:

<i>Chemistry,</i>	<i>Literature,</i>
<i>Railroad Transportation,</i>	<i>English Bible,</i>
<i>Forestry,</i>	<i>Modern Language.</i>
<i>History.</i>	

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VI. THE COURSE IN CHEMICAL ENGINEERING.

*Leading to the First Degree in Chemical Engineering.***FRESHMAN YEAR.**

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| I. TERM—Chemistry,
Higher Algebra,
<i>German, 2 or French,</i> | Rhetoric, I,
Drawing, IV. |
| II. TERM—Chemistry,
Trigonometry,
<i>German, 3, or French,</i> | Rhetoric, I,
Drawing, IV. |
| III. TERM—Chemistry,
Analytical Geometry,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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| I. TERM—Quantitative Chemistry,
Mechanics,
Rhetoric, | Shopwork, IV. |
| II. TERM—Quantitative Chemistry,
Physics,
Differential Calculus, | Shopwork, IV. |
| III. TERM—Quantitative Chemistry,
Physics,
Integral Calculus, | Shopwork, II. |

JUNIOR YEAR.

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|---|---|
| I. TERM—Organic Chemistry,
Electrical Measurements,
Agricultural Chemistry, | German Chemistry, I,
Chemical Thesis. |
| II. TERM—Organic Chemistry,
Thermo-Dynamics,
Metallurgy and Glass-blowing, | Germany Chemistry, I,
Chemical Thesis. |

- III. TERM—Organic Chemistry, German Chemistry, I,
 Spectrum Analysis, Chemical Thesis.
 Agricultural Chemistry, 2 or
 Boilers and Engines,

SENIOR YEAR.

- I. TERM—Physical Chemistry, { Social Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Geology,
- II. TERM—Physical Chemistry, { Political Ethics, I,
 { Chemical Preparations, { Thesis.
 { Industrial Chemistry,
 Direct Current Machinery, or
 Hydraulic Motors, or
 Economic Geology,
- III. TERM—Physical Chemistry, Contracts, I.
 { Chemical Preparations,
 { Industrial Chemistry,
 Alternating Current Machinery,
 or Water Supply and Sani-
 tary Engineering, or Survey-
 ing,

Seniors may take any of the Electives of the Junior Year for corresponding terms.

VII. THE COURSE IN CIVIL ENGINEERING.

Leading to the First Degree in Civil Engineering.

FRESHMAN YEAR.

- I. TERM—Higher Algebra, Rhetoric, I,
 Drawing, Oratory, I.
 German, 3, or French,
- II. TERM—Trigonometry, Rhetoric, I,
 Drawing, Oratory, I.
 German, 3, or French,

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| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |
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SOPHOMORE YEAR.

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| I. TERM—Rhetoric,
Surveying,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| II. TERM—Differential Calculus,
Descriptive Geometry,
Chemistry, | Geodesy, I,
Shopwork, IV. |
| III. TERM—Integral Calculus,
Railroad Surveying,
Chemistry, | Geodesy, I,
Shopwork, II. |

JUNIOR YEAR.

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| I. TERM—Mechanics,
Strength of Materials,
Roads and Pavements, | Architectural Design, I,
Thesis. |
| II. TERM—Physics,
Masonry,
Metallurgy, | Architectural Design, I,
Thesis. |
| III. TERM—Physics,
Boilers and Engines,
{ Water Supply,
{ Sanitary Engineering, | Forestry, I,
Thesis. |

SENIOR YEAR.

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| I. TERM—Bridges and Buildings,
<i>Geodetic Astronomy</i> or
<i>Geology</i> or
<i>Advanced Mechanics</i> or
<i>Electrical Measurements,</i> | { Social Ethics, I,
{ Thesis. |
| II. TERM—Hydraulic Motors,
Bridges and Buildings,
<i>Economic Geology</i> or
<i>Advanced Physics</i> or
<i>Direct Current Machinery,</i> | { Political Ethics, I,
{ Thesis. |

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| III. TERM—Bridges and Buildings, | Contracts and Specifications, I. |
| { Mine Surveying, | |
| { City Surveying, | |
| <i>Railroad Transportation or</i> | |
| <i>Advanced Physics or</i> | |
| <i>Alternating Current Machinery</i> | |
| <i>or Forestry,</i> | |
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VIII. THE COURSE IN ELECTRICAL ENGINEERING.

Leading to the First Degree in Electrical Engineering.

FRESHMAN YEAR.

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| I. TERM—Higher Algebra, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 2, or French,</i> | |
| II. TERM—Trigonometry, | Rhetoric, I, |
| Drawing, | Oratory, I. |
| <i>German, 3, or French,</i> | |
| III. TERM—Analytical Geometry, | Rhetoric, I, |
| Drawing, | Shopwork, IV. |
| <i>German, 4, or French,</i> | |

SOPHOMORE YEAR.

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| I. TERM—Rhetoric, | Shopwork, IV. |
| Mechanics, | |
| Chemistry, | |
| II. TERM—Differential Calculus, | Shopwork, IV. |
| Physics, | |
| Chemistry, | |
| III. TERM—Integral Calculus, | Shopwork, II. |
| Physics, | |
| Chemistry, | |

JUNIOR YEAR.

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| I. TERM—Electrical Measurements,
Strength of Materials,
<i>Descriptive Geometry</i> , or
<i>Theoretical Mechanics</i> , | Machine Design
and Tools, I,
Thesis. |
| II. TERM—Direct Current Machinery,
Advanced Physics,
Metallurgy, | Machine Design
and Tools, I,
Thesis. |
| III. TERM—Alternating Current Machinery,
Advanced Physics,
Boilers and Engines, | Machine Design
and Tools, I,
Thesis. |

SENIOR YEAR.

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|---|-----------------------------------|
| I. TERM—Design of Electrical Machinery,
Electrical Generating Stations and Transmission,
Graphical Analysis of Structures | { Social Ethics, I,
Thesis. |
| II. TERM—Design of Electrical Machinery,
Telegraphs, Telephones,
Signaling Apparatus,
Hydraulic Motors, | { Political Ethics, I,
Thesis. |
| III. TERM—Electric Lighting,
Electric Railways,
<i>Water Supply and Sanitary Engineering</i> , or <i>Surveying</i> , | Contracts and Specifications, I. |

IX. THE COURSE IN MECHANICAL ENGINEERING.

Leading to the First Degree in Mechanical Engineering.

FRESHMAN YEAR.

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| I. TERM—Advanced Algebra,
Drawing,
<i>German</i> , 2, or <i>French</i> , | Rhetoric, I,
Shopwork, II. |
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| II. TERM—Trigonometry,
Drawing,
<i>German, 3, or French,</i> | Rhetoric, I,
Shopwork, II. |
| III. TERM—Analytical Geometry,
Drawing,
<i>German, 4, or French,</i> | Rhetoric, I,
Shopwork, IV. |

SOPHOMORE YEAR.

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|---|---------------|
| I. TERM—Rhetoric,
Mechanics,
Chemistry, | Shopwork, IV. |
| II. TERM—Differential Calculus,
Physics,
Chemistry, | Shopwork, IV. |
| III. TERM—Integral Calculus,
Physics,
Chemistry, | Shopwork, IV. |

JUNIOR YEAR.

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|---|-------------------------------------|
| I. TERM—Electrical Measurements,
Descriptive Geometry,
Strength of Materials, | Shopwork, IV,
Machine Design, I. |
| II. TERM—Direct Current Machinery,
Thermo-Dynamics,
Metallurgy, | Shopwork, IV,
Machine Design, I. |
| III. TERM—Alternating Current
Machinery,
Thermo-Dynamics,
Boilers and Engines, | Shopwork, IV,
Machine Design, I. |

SENIOR YEAR.

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| I. TERM—Steam Engineering (49),
Design of Electrical Machinery,
Bridges and Buildings, | { Social Ethics, I
Thesis,
Automobiles, IV |
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II. TERM—Steam Engineering (50), Design of Electrical Machinery, Hydraulic Motors,	{ Political Ethics, I, Thesis, Heating and Ventilation, IV.
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III. TERM—Steam Engineering (51), Electric Lighting, <i>Water Supply and Sanitary Engineering, or Surveying,</i>	Contracts, I, Refrigeration, IV.
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DEPARTMENTS OF INSTRUCTION.

The method of instruction in the College is varied according to the nature of the subject. Each professor has his individual mode of imparting knowledge, and this, in the result, is advantageous to the learner. In general, the aim is to discuss each branch as the subject-matter requires, yet all are presented analytically, comparatively, and historically, with the view of leading the student to the apprehension of the subject as an organic whole and in its relations. The range of the instruction can be gathered from the following account of the different departments.

I. DEPARTMENT OF PHILOSOPHY.

JOHN HOWARD HARRIS, LL.D.,

PROFESSOR OF PSYCHOLOGY AND ETHICS.

THOMAS ALPHEUS EDWARDS, A.M.,

PROFESSOR OF PEDAGOGY.

The studies in this department embrace Psychology, Philosophy, Ethics, Theism, and Pedagogy.

1. **Psychology, Descriptive and Explanatory.** Required Course. Juniors. First term, five hours.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors. First term, five hours.—PROFESSOR DAVIS.

3. **Lotze, Grundzüge der Psychologie.** Seniors and Juniors. Minor. One hour.

4. **Philosophy of Mind.** Elective to Seniors and Juniors. Second term, five hours.

5. **History of Philosophy.** Lectures. Required of Juniors. Third term, two hours.

6. **Greek Philosophy** (Greek 10). Elective to Seniors and Juniors.—PROFESSOR HAMBLIN.

7. **Roman Philosophy** (Latin 8). Elective to Seniors and Juniors.—PROFESSOR ROCKWOOD.

8. **Philosophy. Jerusalem.** Third term, five hours.

9. **Ethics.** Required of Juniors. Second term, five hours.

10. **Social Ethics—Domestic Relations.** Lectures. Required of Seniors. First term, one hour.

11. **Political Ethics—Duties of Citizenship.** Lectures. Required of Seniors. Second term, one hour.

12. **Ethics of Plato and Aristotle.** Study of the Republic and Nicomachean Ethics, with collateral readings and thesis. First term, five hours.

13. **Philosophy of Religion.** Required of Juniors. Third term, three hours.

EDUCATION.

14. **History of Education.** A general sketch of educational Theory and Practice in Ancient and Modern times. Lectures. Elective to Juniors. Third term, one hour.—PROFESSOR EDWARDS.

14b. **History of Education.** This course aims to orient the student in the wide field of pedagogical knowledge, and to give suitable perspective to professional subjects. It seeks to trace the rise and progress of those movements, innovations and reforms which lie back of the ideals that sway present educational tendency and practice; and, specifically, to trace the source of those deeper social currents, and the discovery of those principles which have contributed to the making and fostering of the American system of free public schools. Elective to Seniors and Juniors.—PROFESSOR EDWARDS.

15. **Psychology of Education.** Based on Colvin's "The Learning Process." Elective to Seniors and Juniors. Third term, five hours.—PROFESSOR EDWARDS.

16. **Comparative Psychology.** Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR DAVIS.

17. **Child Psychology.** Elective to Seniors and Juniors.—PROFESSOR EDWARDS.

18. Philosophy of Education. Based on Horne's Philosophy of Education. Elective to Seniors and Juniors. Second term, five hours.—PROFESSOR EDWARDS.

19. School Administration. High School organization, function and management; discussion of methods; survey of College Entrance Requirements. First term, five hours.—PROFESSOR EDWARDS.

20. Teachers' Course in American History. Methods of teaching History with special reference to the work of secondary schools. Second term, two hours.—PROFESSOR COLESTOCK.

21. Teachers' Course in Greek. The Anabasis and Iliad are used as text. The preparatory work is reviewed, and suggestions made regarding methods of teachings. Some informal lectures are also given regarding the first year's work in Greek. First term, five hours. Seniors and Juniors.—PROFESSOR HAMBLIN.

22. Teachers' Course in Latin. Special topics in grammar, with practical exercises in Cæsar, Cicero, Vergil. Third term, five hours. Seniors and Juniors.—PROFESSOR ROCKWOOD.

23. Teachers' Course in English. Designed to familiarize the student with the authors required for entrance to college.—PROFESSOR PERRINE.

24. Teachers' Course in Mathematics. Mathematics as developed in history and as used in education. (a) Arithmetic: Its culture value, utility, present status in the schools: reforms in arithmetical teaching. (b) Algebra: Its growth during the last three centuries, typical parts (ethical value). (c) Geometry: Its basis, historical position, methods, recent geometry.—PROFESSOR BARTOL.

CERTIFICATES.

The courses in education and methods of teaching, including Child Psychology, the History, the Psychology, and the Philosophy of Education, are helpful to those intending to teach. Students who take not less than eight of these courses will be entitled to a certificate for the work done in addition to the diploma of the Course in which they graduate.

REGISTER OF TEACHERS.

In order to aid Boards of Control in securing suitable teachers, there is kept a registry of graduates of Bucknell University who may wish to engage in teaching. Alumni and friends of the College will render a service if they will inform the President of vacancies.

II. DEPARTMENT OF LAW.

HAROLD MURRAY MCCLURE, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON CONTRACTS AND PARTNERSHIPS.

ALBERT WILLIAM JOHNSON, A.M.,
PRESIDENT JUDGE OF THE SEVENTEENTH JUDICIAL DISTRICT.
LECTURER ON REAL AND PERSONAL PROPERTY.

CLOYD NILLIS STEININGER, A.M.,
ATTORNEY-AT-LAW,
LECTURER ON BILLS AND AGENCY.

The Bucknell College of Liberal Arts offers in its courses for the degrees in Arts and Science a number of subjects specially bearing upon the study of law. Students prepared for college and having taken one year's work in liberal studies will be admitted to the studies in Law. The instruction is by text-book, lecture, and study of cases. A certificate for the work done is given by the department, in addition to the Diploma of the College. But this certificate is not given for any legal subject in which the student's standing is below nine; nor to any student whose general average is below nine. Opportunity is given for the *Review* of the *Latin*, *History* and *Literature* required in the Preliminary Examination for registration as students of Law in Pennsylvania.

Graduates of Bucknell are admitted to registration as students at Law without examination.

1. **Elementary Law.** Robinson's Elementary Law. Third term. Sophomore year.—PROFESSOR COLESTOCK.

2. **Blackstone's Commentaries.** B, I, III, IV. One hour, Junior year, three terms.—PROFESSOR COLESTOCK.

3. **Real Property.** Blackstone, B. II, and Select Cases, Lectures. First term, Junior year.—JUDGE JOHNSON.

4. **Personal Property.** Text-book, Select Cases, Lectures. First term, Senior year.—JUDGE JOHNSON.

5. **Contracts.** Text-book, Select Cases, Lectures. Second term, Junior year.—JUDGE MCCLURE.

6. **Bills and Notes.** Text-book, Select Cases, Lectures. Third term, Senior year.—MR. STEININGER.

7. **Agency.** Text-book, Select Cases, Lectures. Second term, Senior year.—MR. STEININGER.

8. **Partnership.** Text-book, Leading Cases, Lectures. Third term, Junior year.—JUDGE MCCLURE.

9. **Principles of International Law.** Fall term, Seniors and Juniors.—PROFESSOR HEIM.

10. **Roman Law.** Third term, Seniors and Juniors.—PROFESSOR ROCKWOOD.

11. **American Civics.** A study of the frame of Federal and State Government.—PROFESSOR COLESTOCK.

12. **American Constitutional Law.** Third term, Seniors and Juniors.—PROFESSOR HAMBLIN.

13. **Constitutional Limitations.** Cooley's Constitutional Limitations and Cases.—PROFESSOR HEIM.

14. **Comparative Constitutional Law.** Second term, Seniors and Juniors. A comparison of the Constitutions of England, France, Germany, Switzerland, and the United States.—PROFESSOR HEIM.

15. **Moot courts** are held in which an attorney-at-law and a student sit as judges, and students, deputed to represent the respective sides, present their arguments. The presiding student writes the opinion of the court.

III. DEPARTMENT OF ECONOMIC AND POLITICAL SCIENCE.

EPHRAIM M. HEIM, PH.D., PROFESSOR.

1. **Economics, I.** General Course, devoted chiefly to problems of Production and Distribution.

2. **Economics, II.** Money and Banking. Prerequisite, Course I.

3. **Economics, III.** Public Finance. Financial Administration, Taxation, and Public Debts. Alternating with Course II. Prerequisite, Course I.

4. **Corporate Finance and Commercial Law.** Organization and Management of Corporations. Corporation Finance. Form and Nature of Securities and Commercial Paper. Funding Operations, Accounting and Auditing. Nature and Operations of Special Groups

of Corporations, such as Public Service Companies, Financial Institutions, Insurance, etc.

5. Transportation and Commerce. Development of Foreign and Inland Commerce and Transportation. Organization and Methods of Railway Transportation. Theory of Rates, and Methods of State Control. Ocean Transportation, Shipping, and Navigation Acts. Commercial Geography. For Seniors only.

6. Industrial History of United States. Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.

7. Economics. Two hours a week. One of the following subjects will be studied: (1) English Economic History; (2) Socialism; (3) Labor Legislation.

8. American Civics. A study of the American frame of Federal and State Government.—PROFESSOR COLESTOCK.

9. American Constitutional Law. Cooley's Elements of Constitutional Law. A study of the law of the Federal Constitution.—PROFESSOR HAMBLIN.

10. Constitutional Limitations. The Constitutional Law of the American Commonwealth. The sphere of Civil Rights in relation of the exercise of governmental power through the criminal law, the police power, the taxing power, and the power of eminent domain.

11. Comparative Politics. A comparative study of the Constitutions of England, France, Germany, Switzerland, and the United States.

12. Municipal Government. Organization of City Government. Problems of Administration, Municipal Functions. Relation to the State. Second term; five hours. Seniors and Juniors.

13. International Law. First term, five hours. Seniors and Juniors.

14. Political Parties and Party Government. Origin and Growth of Party Government in the United States. Basis of Party Division. Rise and Decline of American Parties. Organization and Machinery of Party Government. European Parties. Lectures, one hour a week, throughout the year. Required in Jurisprudence Course, elective to Sophomores in other Courses.

15. Political Science. Minor Courses, two hours. One of the following will be given: (1) Elements of Political Science; (2) Administrative Law.

16. American Diplomacy. Minor Course, two hours.

IV. DEPARTMENT OF SOCIOLOGY AND LOGIC.

WILLIAM EMMET MARTIN, L.H.D., PROFESSOR.

1. Anthropology, Descriptive and Physical. Elective to Sophomores. Third term, five hours.

2. Sociology, Principles and Theory. Elective to Seniors and Juniors. First term, five hours.

3. Charities and Reform. Seniors and Juniors. Second term, one hour. Prerequisite, Course 2.

4. Municipal Sociology. Seniors and Juniors. Second term, five hours.

5. History of Art. Lectures. Sophomores. Three terms, one hour. I. Painting; II. Sculpture; III. Architecture.

6. Logic, Deductive and Inductive. Second term, five hours.

7. Scientific Method, with Exercises in Analysis. Seniors and Juniors. Second term, five hours.

V. DEPARTMENT OF HISTORY.

HENRY THOMAS COLESTOCK, PH.D., PROFESSOR.

History is studied as the gradually unfolding life-story of the race.

1. Oriental History. A survey of the civilizations along the Nile and the Euphrates, including Egypt, Babylonia, Assyria, Phœnicia, and Persia, constituting an introduction to biblical and classical times. First term, five hours.

2. Hebrew History and Literature. Second term, five hours.
—PROFESSOR PHILLIPS.

3. New Testament History and Literature. Third term, five hours.—PROFESSOR PHILLIPS.

4. Greek Political and Constitutional History. First term, five hours.—PROFESSOR HAMBLIN.

5. **Roman History.** Second term, five hours.—PROFESSOR ROCKWOOD.

6. **Roman Private Life.** Second term, five hours.—PROFESSOR BALLENTINE.

7. **Medieval Europe.** General survey of Western Europe, from the fourth to the thirteenth century, with especial attention to the institutional life of the people and the progress of civilization. First term, five hours.

8. **Modern Europe to 1789.** From the thirteenth century to the opening of the French Revolution. Considers especially the Renaissance, the Protestant Reformation, and conditions combining to produce the French Revolution. Second term, five hours.

9. **Modern Europe since 1879.** The French Revolution, the Napoleonic era, Unification in Germany and Italy. Progress in civilization, and in social and industrial conditions. Third term, five hours.

10. **History of England, a.** Political and industrial development of the English people from the earliest times. Second term, five hours.

11. **Constitutional History of England, b.** With special reference to the growth and development of the present form of constitutional government in England. Second term, five hours. Alternates with Course 10.

12. **American Colonial History, a.** European background of American colonization. Political, industrial, and constitutional conditions in the English colonies. Causes and results of the Revolutionary War.

13. **American Constitutional History, b.** Origin of the Federal Constitution. Growth of nationality. Conflict between nationality and state sovereignty. Issues involving the interpretation of the Constitution.

14. **Industrial History of United States.** Development of Business Organization. Evolution of Types of Industry. Changes in Land Tenure; in the Distribution and Marketing of Products; in Forms of Exchange; in Insurance; in Organization of Labor Force; in Legislative Policy. Race Elements in American Industry.—PROFESSOR HEIM.

15. **Teachers' Course in American History.** General survey of

American history, designed to meet the needs of those who expect to teach history in secondary schools. Minor Course.

16. **The Far East.** Survey of present conditions, social and constitutional, in Japan and China. Minor Course.

17. **Historical Biography.** Detailed study of one or more important historical characters. Minor Course.

18. **Present Conditions in Russia.** Minor Course.

VI. THE GREEK LANGUAGE AND LITERATURE.

THOMAS FRANKLIN HAMBLIN, A.M., LL.D., PROFESSOR.

There are four terms of required work in Greek in the Classical Course, and five in the Greek Philosophical Course; while Greek may be taken as an elective during the entire Junior and Senior years. Besides the Elective Courses a number of Minor Courses are offered. In the Elective Courses a year of poetry alternates with a year of prose. A course of New Testament Greek, designed especially for candidates for the ministry and extending through the Senior year, is given by Professor Phillips.

1. **Homer.** Odyssey, Books 5-8. Review of verb forms and syntax of verbs. Epic forms and styles. Word lists. Metre. First term, Freshman year.

2. **Lysias.** Six orations. Inflection and syntax of nouns. Prose composition. Attic oratory. Translation at sight and hearing. Second term, Freshman year.

3. **Plato.** Apology and selections. Special topics in Greek Syntax. Philosophy and influence of Socrates. The Sophists. Extracts from the Memorabilia at sight. Third term, Freshman year.

4. **Greek Political and Constitutional History.** Bury's History of Greece is used as a text-book. The class is also required to do collateral reading on important epochs. First term, Sophomore year.

5. **Demosthenes.** Olynthiacs and Philippics. History and Politics of the Macedonian period. Style of Demosthenes. Second term, Sophomore year.

6. **Æschylus and Sophocles.** Prometheus Bound and Œdipus Tyrannus. The drama, theatre, and metres. First term in alternate years.

7. Euripides and Aristophanes. *Medea* and *The Clouds*. Greek Comedy. Religious influence of the poets. Influence of the Classical on the Modern Drama. Second term in alternate years.

8. Greek Literature in English. A course especially designed for students in the Philosophical and Scientific Courses, that they may become acquainted with some of the Greek masterpieces. The best translations will be studied and explained, and informal lectures will be given on various phases of Greek Literature. Third term, Senior and Junior years.

9. Demosthenes. *De Corona*. The oratory of Demosthenes, from a literary and political point of view. *Æschines* against Ctesiphon at sight. Second term, Seniors and Juniors; alternating with 6.

10. Plato. The Phædo. Greek Philosophy. The influence of Plato. Third term, Seniors and Juniors; alternating with 7.

11. New Testament Greek. The Gospel according to Luke. Hellenistic Greek. Second and third terms, Freshman year; one hour a week.

12-14. New Testament Greek. Translation of the synoptic Gospels; interpretations; Burton's *Moods and Tenses*; characteristics of Hellenistic Greek. Designed for students desiring a linguistic and historical foundation for the interpretation of the New Testament. Three terms. Elective to Seniors.—PROFESSOR PHILLIPS.

15. Teachers' Course in Greek. The *Anabasis* and *Iliad* are used as text-books. Thus the Preparatory work may be reviewed, and suggestions received regarding the methods of teaching. Some informal lectures are also given regarding the first year's work in Greek. First term, Seniors and Juniors.

16. Xenophon. The *Symposium* and *Æconomicus*. Sophomores and Freshmen. Winter terms in alternate years, one hour.

17. Homer and Lucian. Selections from each in alternate years. Sophomores and Freshmen. Third term, one hour.

18. Xenophon and Æschines. The *Memorabilia* and the oration against Ctesiphon, in alternate years. Seniors and Juniors, first term, one hour.

19. Sophocles and the Lyric Poets. *Antigone* and selections from the Lyric Poets in alternate years. Seniors and Juniors, second term, one hour.

VII. THE LATIN LANGUAGE AND LITERATURE.

FRANK ERNEST ROCKWOOD, LL.D., PROFESSOR.

FLOYD GEORGE BALLENTINE, PH.D., ASSISTANT PROFESSOR.

There are four terms of required work in Latin and eleven of elective in the Classical and Latin Philosophical Courses. Special courses, subject to change from time to time, are also offered.

A. Candidates for the Degree of Bachelor of Science take Latin daily during the Freshman year. This course is intended for students who have passed only in the General Requirements in Latin, for admission. The work consists in the study of *Cicero* (*selected speeches*) and *Vergil*, or *Livy*, and *Prose Composition*.

B. The following courses are designed for students in the Classical and Philosophical Courses, but are also open as electives to students in the Science Course who may be qualified to take them:

1. **Cicero.** *De Senectute*. *Livy*, Book I. Review of special topics in Latin Grammar. Oral and written exercises in Prose Composition, based upon the text. Translation at sight and at hearing. First term, Freshman year, two divisions.

2. **Livy.** Books XXI, and XXII. Latin Prose Composition, based upon the text. Roman history: Special chapters in Liddell. Second term, Freshman year, two divisions.

3. **Velleius.** Roman History. *Pliny*. Selections from the *Epistles*. Translation at sight. Latin Prose Composition, based upon the text. Third term, Freshman year, two divisions.

4. **Horace.** Selections from the *Odes*, *Satires*, and *Epistles*. Prosody; Historical Outlines of the Latin Language and Literature; *Wilkins' Primer*; *Lectures*. First term, Sophomore year, two divisions.

5. **Roman History.** The work is based on Meyer's *Rise and Fall of Rome*. *Mommsen*, *Bury* and *Gibbon* are used for supplementary reading. Second term, Sophomore year.

6. **Quintilian.** Books X and XII. Roman Literature. Second term; open to those who have taken Course 4; alternating with 12.

7. **Juvenal.** Selected *Satires*. Third term; open to those who have taken Course 4.

8. **Roman Philosophy.** Cicero and Seneca. First term; open to Seniors and Juniors; alternating with 11.

9. **Plautus and Terence.** Selected Plays. Lectures on such subjects as the life and influence of Terence, the Roman theatre, the production of comedy, etc. Second term, open to Seniors and Juniors; alternating with 14.

10. **Latin Inscriptions.** Allen's Remnants of Early Latin; Egbert's Manual. Third term; open to Seniors and Juniors; alternating with 13.

11. **Tacitus.** Annals. Translation at sight. Roman History. First term; open to Seniors and Juniors; alternating with 8.

12. **Latin Poets.** Crowell's Selections. Roman Literature. Second term; open to those who have taken Course 4; alternating with 6.

13. **Teachers' Course in Latin.** Special topics in grammar with practical exercises in Cæsar, Cicero, Vergil. Third term; open to Seniors and Juniors; alternating with 10.

14. **Roman Private Life.** Lectures; required reading; one report, involving elementary investigation. Second term; open to Seniors and Juniors; alternating with 9.

15. **Roman Law.** Morey's Roman Law; Sandar's Institutes of Justinian; lectures and reports. Third term; open to Seniors and Juniors; required in the Course of Jurisprudence.

16. **Christian Writers.** Tertullian and Latin Hymns, one hour.

17. **Classical Philology.** Introductory Course, one hour.

VIII. THE ENGLISH LANGUAGE AND LITERATURE.

ENOCH PERRINE, LITT.D., PROFESSOR.

1. **English Literature.** Introductory Course. Designed to give a general knowledge of the history of English Literature from the Elizabethan to the Victorian periods, inclusive. Required, second term, Sophomore.

2. **English Literature from 1832.** For those who have taken Course 1, and alternating with Course 13.

3. **English Literature, 1790-1832:** Wordsworth, Coleridge,

Shelley, Byron. For those who have taken Course 1, and alternating with Course 14.

4. **English Literature**, 1714-1790. For those who have taken Course 1, and alternating with Course 15.

5. **English Literature**, 1600-1660. For those who have taken Course 1 and alternating with Course 8.

6. **Shakspeare**. Reading of several plays, chiefly as studies in interpretation. For Seniors and Juniors.

7. **Shakspeare**. His mind and art. Critical study of *A Midsummer Night's Dream*, *Hamlet*, and *Tempest*. For Seniors and Juniors.

8. **The English Drama**. Its development from the earliest times to Shakspeare. For those who have taken Course 1, and alternating with Course 5.

9. **Teachers' Course in English**. Designed to familiarize the student with those authors, both in the way of theory and practice, that are required for entrance to College. For those who have taken Course 1, and alternating with Course 10.

10. **Principles of Literary Criticism**. For Seniors and Juniors, alternating with Course 9.

11. **American Literature**, with special reference to the national period. For those who have taken Course 1; alternating with Course 12.

12. **Journalism**, a study and practice of the various forms illustrated in the metropolitan "dailies," together with proof-reading, study of the functions of editors, and readings in the history of great American journalists and journals. For those who have taken Course 1.

13. **Anglo-Saxon**. Old English Language and Literature, with special elective in *Beowulf*. For those who have taken Course 1 and the required work in German.

14. **Chaucer**. Middle English Language and Literature, with readings in Langland and Gower, and in Lounsbury's *The English Language*. For those who have taken Course 1 and the required work in French.

15. **Modern English**. Special comparative readings in Modern English Prose. For those who have taken Courses 13 and 14, or who show special fitness for the work.

16. **Foreign Literature in English.** Lectures on some of the world's masterpieces are given to the Seniors on Monday mornings during the third term. Alternating with this Course, lectures are given on Modern English Fiction.

17. **Periods of English Literature.** Special work is given in different periods of English Literature to those who have passed with credit in Courses 1 and 2.

18. *Le Public et les Hommes de Lettres en Angleterre, 1660-1744; Beljame; or Ecrivains Modernes de l'Angleterre, Montegut.* Minor.

19. **Shakspeare.** Fünf Vorlesungen von Bernhard ten Brink. Minor.

IX. RHETORIC AND ORATORY.

LLEWELLYN PHILLIPS, A.M., D.D., PROFESSOR.

BROMLEY SMITH, A.M., INSTRUCTOR IN RHETORIC AND ORATORY.

CHARLES CARPENTER FRIES, A.M., INSTRUCTOR IN RHETORIC.

A.—COURSES IN RHETORIC AND COMPOSITION.

1. **Rhetoric and English Composition.** Introductory Course. Themes, weekly recitations, and consultations. Three terms; one hour. Required of Freshmen.

Students who show good preparation are admitted to a special section, in which more advanced work is given.

2. **English Composition.** Daily themes, recitations, and consultations. First term, five hours. Required of Sophomores.

3. **Argumentation.** Baker's *Principles of Argumentation*. Briefs, forensics and oral discussion. Third term. Open to students who have passed in 1 and 2.

4. **English Composition.** *Advanced Course.* Wendell's *English Composition*. Daily and fortnightly themes, recitations, and consultations. Second term; five hours. Open to Seniors and Juniors.

5. **Theses.** Every member of the Junior and the Senior Class writes a thesis. The Junior theses contain not less than two thousand words, the Senior theses not less than three thousand words. The subjects are chosen in conjunction with the heads of the departments to which the subjects belong. Upon these theses are based the Junior Exhibition orations and the commencement orations. The

subjects of the theses are presented to the Professor of Rhetoric before October 22 and an outline of each thesis is presented to the Professor of Rhetoric at the close of the first term. The completed theses are handed in before March 1. They are examined first by the heads of the departments to which the subjects belong and afterwards by the Professor of Rhetoric.

6. **English Prose.** Studies in Structure. Two hours.

7. **English Prose.** Studies in the Principles of Style. Two hours.

8. **Teachers' Course.** The theory and practice of Rhetoric and Composition. Carpenter, Baker, and Scott. The teaching of English. Five hours. Open to students who have attained an average grade of nine in Courses 1, 2, and 4.

9. **The Theory of Rhetoric.** A study of the laws of thought.

10. **Movements of Thought in the Nineteenth Century.** Methods of investigation; thesis. Open to Seniors.

B.—COURSES IN ORATORY.

The aim is to train the student to speak effectively in the pulpit or upon the platform or at the bar. All instruction is based upon the principle that impression precedes and determines expression. Each student receives individual attention during the first half of the course in elocution, during the latter half in oratory. Special attention is given to debate. Each student is urged to take an active part in the work of the Literary Societies.

The ultimate object of the *physical culture* is to secure a good presence and the ability on the part of the voice and body to interpret correctly the conceptions of the mind.

FRESHMEN.

1. **Physical Culture.** Exercises for securing correct position, and harmony of movements and attitudes; exercises for breath control and vocal culture and for grace in gesture.

2. **Public Speaking.** Study of the fundamentals of public speaking; delivery of short extracts from masterpieces of oratory, aiming to secure directness, earnestness, and dignity of address. Required, first and second terms, one hour.

3. **Public Speaking.** Delivery of complete orations illustrating and applying the principles studied in the first and second terms.

A prize is offered to the young man and one to the young woman of the Freshman Class who excel in the delivery of these orations. Required, third term.

SOPHOMORES.

4. **Public Speaking.** Close analysis and study of the details of public speaking; study of the various styles of delivery and of the different forms of discourse. Delivery of selected extracts from masterpieces illustrating each. Extemporaneous speaking. Reviews and continuation of the physical culture of Course 1. Required, first term, one hour.

5. **Public Speaking.** Study of narration. Description and argumentation. Delivery of selections illustrating each. Preparation and delivery of original narrations and descriptions. Extemporaneous speaking. Required, second term, one hour.

6. **Public Speaking.** Delivery of complete argumentative selections. Preparation for and participation in debate. A prize is awarded to the young man of the Sophomore Class who shall excel in the delivery of an assigned selection in argumentation. A prize is awarded to the young woman of the Sophomore Class who shall excel in the delivery of an assigned selection in narration. Third term.

7. **Public Address.** The various forms of addressing the public are studied. Beginning with open letters and editorials, the class advances to presentations, acceptances, nominations, dedications, inaugural addresses, institute talks, banquet toasts, eulogies, commemorative orations, etc. Each student prepares and delivers before his class specimens in the above forms. Third term, five hours; Sophomores.

8. **Practical Oratory.** Briefs and notes are made the basis for extemporaneous addresses; Congressional speeches and modern occasional orations are outlined and studied. The application of rhetorical and of oratorical principles in their connection with logic is considered. Special work in line with the student's intended profession is given. A limited field, historical, economic, or otherwise, is assigned to each student for development. When his orations have been examined and corrected, the student delivers them before the class. First term, five hours; Seniors and Juniors.

9. **Interpretative Reading.** The use of the voice in bringing out the meaning of the best literature is obtained by practice in

class. Attention is given to the pedagogical and psychological aspects of reading. Second term, five hours; Seniors and Juniors. (Counts as Minor.)

JUNIORS.

10. Prize Contest. A prize contest in Oratory is held in the third term by Juniors, appointed on the ground of superiority in composition and elocution as shown during the preceding terms of the college Course.

11. Prize and Honor Debate. During the year there are three debates by Juniors, the last of which is a prize and honor debate.

12. Oral Debates. Briefs, Debates, and Criticisms. The Professor of Economic and Political Science coöperates in this Course. First term; one hour.

The contestants for the Junior Prize are selected from the students who take this Course.

SENIORS.

13. Honors in Debating. During the year an elective course in debating is offered to Seniors. The last debate is public.

14. Prize in Oratory. A prize is offered for the best oration of those delivered by the Senior orators at Commencement, regard being had equally to subject-matter, style, and delivery.

X. DEPARTMENT OF MODERN LANGUAGES.

GUIDO CARL LEO RIEMER, A.M., PH.D., PROFESSOR.

BENJAMIN W. GRIFFITH, A.M.,
ASSISTANT PROFESSOR OF FRENCH.

MARC LUTHER BALDWIN, A.M.,
INSTRUCTOR IN GERMAN.

A.—GERMAN.

1. Elementary Course. Grammar; German Prose; practice in writing German. Three terms.

2. German Prose. Grammar; practice in writing German, reading of Prose and Poetry. Elective to those who have taken Course 1, or its equivalent.

3. **German Prose and Poetry.** Grammar; practice in writing German. Elective Course for those who have taken Course 2.
4. **Historical German Prose.** Practice in writing German. Elective Course for those who have taken Course 3.
5. **Modern German Novelists.** Practice in writing German. Elective Course for those who have taken Course 4.
6. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.
7. **Schiller.** Practice in writing German; lectures. Elective Course for those who have taken Course 4.
8. **Goethe.** Practice in writing German; lectures. Elective Course for those who have taken Courses 5-7.
9. **Goethe.** Shorter Poems, *Dichtung und Wahrheit*, *Faust I*; lectures. Elective Course for those who have taken Course 8.
10. **Lessing.** Practice in writing German; lectures. Elective Course for those who have taken Course 9.
11. **Kleist and Grillparzer.** Practice in writing German; lectures. Course 11 alternates with Course 8.
12. **Hebbel and Ludwig.** Practice in writing German; lectures. Course 12 alternates with Course 9.
13. **Heine and Uhland.** Practice in writing German; lectures. Course 13 alternates with Course 10.
14. **Lotze.** *Grundzüge der Psychologie.* (Philosophy 3.)
15. **German Biological Science.** (Biology 21.)
16. **German Chemical Science.** (Chemistry 16.)
17. **Scientific German.** Designed especially for students in the Engineering Courses. Two hours, throughout the year.

B.—FRENCH.

1. **Elementary Course.** Grammar; French prose; practice in writing French.
2. **French Prose.** Grammar; practice in writing French. Elective Course for those who have taken Course 1.

3. **French Prose and Poetry.** Grammar; practice in writing French. Elective Course for those who have taken Course 2.

4. **Historical and Critical French Prose.** Practice in writing French. Elective Course for those who have taken Course 3.

5. **Authors of the XIX Century.** Practice in writing French. Elective Course for those who have taken Course 4.

6. **Corneille and Racine.** Practice in writing French; lectures. Elective Course for those who have taken Course 5.

7. **Molière.** Practice in writing French; lectures. Elective Course for those who have taken Course 6.

8. **Authors of the XVIII Century.** Practice in writing French. lectures. Elective Course for those who have taken Course 7.

9. **A View of French Literature.** Rapid reading; practice in writing French; lectures. Elective Course for those who have taken Course 8.

C.—SPANISH.

1. **Elementary Spanish.** Grammar. Conversation. Translation of easy prose. Elective Course, for Seniors and Juniors. First term, five hours.

2 and 3. **Spanish Prose.** Translation, Composition, Conversation. Elective Course for Seniors and Juniors. Second and third term, five hours.

D.—ITALIAN.

Special instruction for engineering students in Italian Grammar and Conversation.

XI. DEPARTMENT OF MATHEMATICS.

WILLIAM CYRUS BARTOL, PH.D.,
PROFESSOR OF MATHEMATICS AND ASTRONOMY.

CHARLES ARTHUR LINDEMANN, A.M.,
PROFESSOR OF APPLIED MATHEMATICS.

FRANK MORTON SIMPSON, SC.M.,
PROFESSOR OF PHYSICS AND DRAWING.

WALTER KREMER RHODES, A.M., E.E.,
PROFESSOR OF ELECTRO-TECHNICS.

FRANK EUGENE BURPEE, A.M.,
PROFESSOR IN MECHANICAL ENGINEERING.

MARTIN LINNAEUS DRUM, SC.M.,
ASSISTANT PROFESSOR OF MATHEMATICS AND SURVEYING.

EDGAR TILLMAN CLAPP,
HAROLD CHARLES EDWARDS,
ASSISTANTS IN SURVEYING.

FRED OSCAR SCHNURE,
CLARENCE WILLIAM PETERS,
FRED FELTON MELLOTT,
ASSISTANTS IN DRAWING.

ALBERT JOHN CLARKE,
ROLAND KEILHOLTZ HOKE,
THOMAS LEWIS JAMES,
ASSISTANTS IN SHOPWORK.

WILLIAM ELTON BOTT,
ASSISTANT IN PHYSICS.

1. **Solid Geometry.** The course includes the geometry of solids with plane surfaces, the cone, the cylinder, the sphere, the spherical triangle, and conic sections. Freshman year, Classical Course, first term, five hours.

2. **Algebra.** The topics are ratio, proportion, variation, progressions, theory and development of functions, logarithms, differentiation of algebraic functions, indeterminate equations, series, higher equations. Freshman year, first or second term, five hours.

3. **Determinants and Advanced Algebra.** Open to students who have completed Course 2. Second term, five hours.

4. Trigonometry. The course includes plane trigonometry with application to problems in mensuration and surveying, and spherical trigonometry with applications to problems in astronomy. Freshman year, second or third term, five hours.

5. Analytical Geometry. The student is taken through the properties of the right line, the circle, and the conic sections, and higher plane curves. The course is intended to give a clear conception of the methods of Cartesian analysis and a knowledge of its results. Freshman year, third term, five hours, or Sophomore year, first term, five hours.

6. Higher Analytical Geometry. The course covers the geometry of three dimensions, surfaces of revolution and higher plane curves. Junior year, first term, five hours.

7. Differential Calculus. The course includes higher derivatives and functions of several variables, infinite series, maxima and minima. Prerequisite, Course 5. Sophomore year, second term, five hours.

8. Integral Calculus. The course includes the methods of integration, rectification and quadrature of plane curves, surfaces and solids of revolution, and application to problems in Physics and Mechanics. Sophomore year, third term, five hours.

9. Differential Equations. A course with mechanical applications. Senior year, first term, five hours.

10. Descriptive Astronomy. The aim of the course is to present in concise form a synopsis of astronomical knowledge to date. Lectures. Sophomore year, Arts and Science Courses, first and second terms, one hour.

11. General Astronomy. The subject is taught by text-book, with illustrations in the observatory. The students have free use of the ten-inch equatorial telescope. Third term, five hours.

12. Geodetic Astronomy. The course includes the use of the astronomer's transit and micrometer; observations for Time; conversion of Time; Latitude, Longitude, Azimuth and their geodetic determination; figure and dimensions of the Earth; use of the American Ephemeris; practice in the Observatory. Prerequisites, a course in Surveying and one in the Elements of Astronomy. Seniors, first term, five hours.

13. Plane and Topographical Surveying. Ten hours per week for thirteen weeks. Text-book, Breed & Hosmer. Recitations on text.

Lectures, tests. Field practice in each position on corps using transit, Y, dumpy and hand levels, plane table and compass in surveys for area, for topography, in leveling for profile, grading, excavation, etc. Making attendant computations and maps. Adjustment and care of instruments.

14. Geodetic Surveying. Minor course. Sophomore Civil Engineering, one hour throughout the year.

15. Railroad Surveying. Recitation on text. Lectures, tests. Computation, draughting and field practice of simple, compound, parabolic, and easement curves. Field practice in each position on corps making a preliminary surveying for a cross-country railroad one and three quarter miles in length. Computations and draughting for determining paper location, fixed grades, amount of excavation, vertical curves, questions of haul, etc. Field practice in putting in paper location and setting slope stakes. An inspection of portions of the Reading and Pennsylvania tracks in a study of switches, Y's, and crossings.

15a. A Course in Surveying specially adapted to their needs is offered as an elective to the Seniors in Chemical, Electrical and Mechanical Engineering.

16. Mine Surveying. Problems in Mine Surveying, such as plumbing the shaft, location of borehole, lining up chambers, driving tunnels, are worked out in class and with the instruments. Plotting of notes forms a part of the work. Senior Civil Engineering, third term, five hours for six weeks.

17. City Surveying. The common problems incidental to city engineering are considered, field work, notes, reports, drawing specifications, and estimates being required. Senior Civil Engineering, third term, five hours for six weeks.

18. Descriptive Geometry. A study of the representation of lines, plane surfaces, solids, and sections of solids; the projection of points, lines, and surfaces; practical problems. Engineering Courses, Sophomore year, second term, five hours, and Junior year, first term, five hours.

19-21. Courses in Drawing. Extending through the Freshman year of the Courses in Engineering, and required of all candidates for the first degree in Civil, Mechanical or Electrical Engineering. Ten hours a week.

(1) **Linear and Free-hand.** A course in drawing to give the student facility in the use of instruments; Geometrical problems; cross-sectioning; shading; isometric drawing; sketching from models.

(2) **Lettering.** The form and proportion of standard letters, structural details; methods of spacing; laying out titles.

(3) **Architectural Drawings.** Plans, elevations, and perspective drawings; copy of standards.

(4) **Pen and Color Topography.** Topographical signs; methods of hill shading; surface forms by contours and in color and pencil; enlarging and reducing maps, rendering in water colors, sepia, and charcoal.

(5) **Tracing and Blue Printing.** Photographic methods of the Architect and Engineer.

22. **Architectural Design.** The design of brick and stone structures, including the preparation of plans and specifications. Junior Engineering, one hour, first and second terms.

23-25. **General Physics.** (Three terms.) These courses in Physics are required in the Engineering Courses and are elective in the other Courses. Instruction is given in the Laboratory supplemented by recitations and lectures.

(a) **LABORATORY.** The Laboratory instruction extends throughout the year and includes experiments illustrating the general laws in all branches of Physics. The experiments are largely quantitative and use is made of instruments of precision. The work is entirely individual. The student is required to take notes in the Laboratory, elaborating them outside and presenting for criticism from time to time.

(b) **RECITATIONS.** Recitations supplement the laboratory work. The study of a text covering the theoretical and mathematical side of the subject is required.

(c) **LECTURES.** Frequent lectures are given in which use is made of lecture-room apparatus. All important phenomena are illustrated and experimental demonstrations of the principal laws are presented.

(1) **Mechanics and Heat.** First term.

(2) **Electricity and Magnetism.** Second term.

(3) **Acoustics and Optics.** Third term.

26-29. **Advanced Physics.** The course extends throughout the year and assumes that the student has completed Courses 23-25 or the equivalent. Instruction is given chiefly in the Laboratory. Students are instructed in the use of instruments of precision employed in Heat, Light, Electricity, and Magnetism. The work in the Labo-

ratory is supplemented by written reports in which both general and theoretical results obtained are discussed. These reports afford the basis for criticism of the work. The work must be pursued in such order as the appointments of the Laboratory may require.

26. Electrical Measurements. In this course the student is required to make a thorough study of the instruments of precision used in electrical testing laboratories. The Laboratory is supplied with a large number of galvanometers of the various types, standard cells, standards of resistance, condensers, bridges of the various types, Kelvin Balance, Siemens Dynamometer, variable standard of self-inductance, potentiometers, etc. In brief, the work covers

(a) Measurement of current, E. M. F., Resistance, Capacity, Induction.

(b) Study of primary and secondary batteries and standard cells.

(c) Tests and calibration of commercial instruments.

(d) Magnetic behavior of iron. Hysteresis.

27. Heat. A thorough study of the first and second laws of thermodynamics is made. The laboratory work consists of exhaustive studies in *thermometry*, including high temperature measurements by use of the platinum resistance thermometer and the thermo-couple. *Calorimetry*, including the determination of heat values of *solid*, *liquid*, and *gaseous* fuels. Also the steam calorimeter. *Mechanical equivalent of heat* by means of the continuous-flow calorimeter and the Rowland apparatus.

28. Light. The student is instructed in the use of the spectrometer, spectroscope, interferometer, and photometer. A careful study is made of the candle-power of various types of incandescent lamps and gas burners using the Bunsen, Jolly and Lummer-Brodhun screens.

29. Spectrum Analysis. Recitation one hour, Laboratory eight hours per week.

Comparison, observation and mapping of emission spectra with the spectroscope; the qualitative analysis of unknown chemical mixtures and minerals; spark and arc spectra of solids; sparks and flame spectra of solids, liquids and gases; absorption spectra of certain mixtures and coloring materials.

The equipment comprises a fine spectroscope by Brashear, a Rowland grating of 14,438 lines to the inch, a spectrometer by the Geneva

Society, prisms of all types by the best foreign makers, absorption cells, etc.

30. Strength of Materials. Simple and combined stresses are considered, along with their resulting deformations, methods of testing the materials of construction are outlined, many problems in the design and investigation of beams, columns, shafts, footings, etc., are solved, reinforced concrete receiving special attention. First term, Junior Engineering, five hours.

31. Masonry Construction. The materials of masonry construction and their preparation and use receive attention; a study is made of foundations—ordinary, pile, and under water; masonry dams, retaining walls, abutments, piers, culverts, and elastic arches in stone and concrete are designed and investigated, drawings being prepared for the same. Second term, Junior Civil Engineering, five hours.

32-34. Bridges and Buildings. The first term is devoted to Graphical Statics, problems being worked out daily in the drafting room. The work of the second term consists in the determination of stresses in framed structures by means of graphic and algebraic methods. The third term is spent in the calculation and designing of several roof and bridge trusses. Senior Civil Engineering, three terms, five hours.

35. Roads and Pavements. The economic location, design, and construction of roads and pavements are considered, comparisons being made between the various methods and materials, sections of roads and streets are surveyed and from the notes taken plans, specifications and estimates for construction and paving are prepared. First term, Junior Civil Engineering, five hours.

36. Hydraulics and Hydraulic Motors. This course includes the theory of Hydrostatics and Hydraulics, the flow of water over weirs, through orifices and tubes, and in pipes, canals, and rivers; the measurements of water-power; water wheels and turbines. Senior Engineering, second term, five hours.

37. Water Supply and Sanitary Engineering. Under the head of the collection and storage of water are taken up, quantity of water required, rainfall, flow of steams, storage and evaporation of water, supplying capacity of water sheds, springs, and wells. The flow of water in streams, pipes, and channels is discussed, as also the practical construction of water works. A study is made of the various methods of sewage disposal. Third term, Junior Engineering, five hours.

38. Contracts. In this course are given the principles of Common Law as applied to contracts. Third term, Senior Engineering, one hour.

39. Theoretical Mechanics. Differential and integral calculus are required for admission to this course. The first part of the term is given to ordinary differential equations. This is followed by the study of forces, couples, moment of inertia, and flexible cords, together with the geometry of motion, dynamics of machinery, work, energy, friction, and impact. Juniors, first term, five hours.

40. Direct Current Machinery. This course must be preceded by the Course in Electrical Measurements or its equivalent. Attention is given to the principles of measuring instruments and their calibration, absolute measurements of inductance, principles of dynamo electric machinery, structural details and performance characteristics together with related problems. Lectures, recitations, and laboratory work. Juniors, Engineering, second term, five hours.

41. Alternating Current Generators, Transformers and Motors. Electromotive force and current curves are traced, and their modifications as determined by various conditions of the receiving circuit are noted carefully. Efficiency, regulation and general performance of alternating current apparatus are studied in detail. This course must be preceded by the course in Direct Current Machinery. Lectures, recitations, and laboratory exercise. Juniors, Engineering, third term, five hours.

42. Design of Electrical Machinery. During the first part of the work in design type forms of electromagnets, direct current generators and motors are computed and drawings made of the electrical and mechanical details. In the second part of the course, type forms of alternating current generators, transformers, and induction motors are computed and drawn in detail. Exercises are given in the winding of transformers and induction motors. Lectures, computing exercises, drawing and shopwork. Seniors, Electrical Engineering, first and second terms, five hours.

42. Generating Stations and Sub-stations, Distribution of Electricity, Storage Batteries. Comparative performance of the important prime movers, and the economic management of generating plants and sub-station equipment are studied in detail and practical estimates made. Attention is also given to the application of secondary cells to the problems of distribution. Seniors, Electrical Engineering, first term, five hours.

44. Telegraph, Telephone, Railway Signal and Related Ap-

paratus. Attention is given in detail to the electrical connections, and principles of operation of the various types of apparatus. Efficiency tests are made and the graphs plotted. Recitations and laboratory work. Seniors, Electrical Engineering, second term, five hours.

45. Electric Lighting, Construction, Wiring and Economics. The various systems and arrangements of wiring for lighting and power distribution are investigated, and practical problems in the economics of wiring and line construction are computed. Typical systems are worked out in detail. Seniors, Electrical Engineering, third term, five hours.

46. Electric Railways, Construction, Operation and Economics. This course deals with the theory and design of the different types of electric railway construction. Analysis of train performance, types of control, systems of braking and methods of motor suspension are studied in detail. The economics of the operation and maintenance of American electric railways is considered in the conclusion of the Course. Seniors, Electrical Engineering, third term, five hours.

47. Machine Design, Machine Tools. Elementary machines, generation of tooth, outline in gears, and aggregate combinations are studied in detail, followed by the computations of type forms of cutting and grinding tools. Lectures, recitations and drawing. Juniors, Electrical Engineering, throughout the year, one hour.

48. Boilers, Steam, Gas, Air, and Oil Engines, Valve Gears, and Governors. This is a general course dealing with the thermodynamics of the heat engine, the theoretical, indicated and actual horsepower of the steam engine, and methods of calculating each. A study of the different types of steam boilers, and how to calculate and use them, is made. The general subject of combustion is taken up and calculations made on different kinds of fuel, both from proximate and ultimate analyses. A large number of problems relating to steam engines, boilers and power plants are given, and three or four actual tests on engines and boilers are made and reports are made out in accordance with the standard forms. Junior year, Engineering all Courses, third term five hours.

49, 50, 51. Steam Engineering. Senior year, Mechanical Engineering, five hours, through the year.

49. Steam Engines and Turbines. In this course the different types of steam engines and turbines are carefully studied, going more into detail than in Course 48, special attention being given to the moving parts such as valves, valve-gears, etc. Also the various econ-

omizing appliances and their effect upon the cost of producing power are taken up. The classroom work is supplemented by frequent tests on engines, by means of which the theoretic calculations are verified. First term.

50. Boilers. A careful study of the construction and settings of different types of boilers is made. Different systems of steam heating are considered and the student is required to design and calculate all dimensions for a steam boiler and piping system of proper capacity to heat a given building, locating all radiators, valves, cocks, steam-traps, etc. Attention is also given to feed water heaters, pumps, injectors and other boiler auxiliaries, as well as to the matter of boiler scale and its preventatives. Second term.

51. Steam Engine Design. This course follows very closely Course 49, covering the design of the principal parts of the steam engine, such as the cylinder, piston, shaft, fly-wheel, governor, etc. After the principles of design have been carefully worked out in the classroom each student is required to design and draw the parts for a steam engine of given size. Third term.

52-54. Shopwork. In Mechanical Engineering, shopwork is required of students throughout the four years of the course. In Civil, Electrical and Chemical Engineering, it is required throughout the Sophomore year. The Machine Shop is provided with all necessary appliances for teaching the subject in the best manner. Four courses are given, each extending through a year.

52. Wood-working. The course in wood-working consists of carpentry, cabinet work and the principles of wood-turning. Freshman year, Mechanical Engineering, two hours.

52. Pattern-making and Moulding. A general course covering patternmaking, simple moulding and the principles of more complex moulding and machine-shop practice. The patterns are made and moulded and the castings machined by the same students. Parts of actual machines, such as gas engines, speed lathes and electric motors are made and assembled during the course. Sophomore year, all Engineering Courses, four hours.

54. Gas and Gasoline Engines. A careful study is made of the various types of gas and gasoline engines, their theory, history and design being discussed. Each student is required to design the parts, make the patterns and actually build a small-sized gas engine, putting it together ready to run. Junior year, Mechanical Engineering, four hours.

55. Steam Engine. The work in this course is similar to that in Course 53, except that either a steam engine or an electric generator is built. Senior year, Mechanical Engineering, four hours.

56. Internal Combustion Engines. A lecture course supplemented by reading and problems. It starts with the general theory of the internal combustion engine, expanding into a detailed study of the actual machine as manufactured and used. Special attention is given to the different types of engines, methods of introducing the working fluid and the various systems of ignition, the automobile engine receiving a major portion of the time. Senior year, fall term, four hours.

57. Heating and Ventilation. In this course a general study of the various systems of heating buildings is taken up. Attention is given to the comparative merits, under differing circumstances, of the different systems, such as hot air, steam, hot water; direct and indirect heating; ventilation by fan and by natural air currents, special emphasis being given to installing details such as piping systems, location of drips, air valves, etc., together with computation of costs and efficiencies. The lectures are accompanied with problems and experiments. Senior year, winter term, four hours.

58. Refrigeration. This course consists of a series of lectures accompanied by illustrative problems bearing upon the various principles and systems of refrigeration. A study is made of the properties and action of ammonia as applied to refrigeration plants. The ice plant is studied in detail and cold storage construction is considered. The subject is taken up from the point of view both of operation and economics. Senior year, Mechanical Engineering, four hours.

XII. DEPARTMENT OF CHEMISTRY.

WILLIAM GUNDY OWENS, A.M., PROFESSOR.

GLENN VINTON BROWN, PH.D.,

PROFESSOR OF QUANTITATIVE AND PHYSICAL CHEMISTRY.

WILLARD LESTER MOYER,

MAURICE BACON COOKE,

MALCOLM BUFFINGTON,

ASSISTANTS.

The courses in Chemistry are designed to give a comprehensive view of the field covered by chemical investigation and to train the student in the various methods of chemical research. The courses as a whole are offered to those who expect to teach chemistry or

enter the testing or industrial laboratory. As chemistry is at the foundation of the natural sciences, the first courses are essential to the study of science and medicine, and are important for general culture.

1. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds. First term.

2. Descriptive Chemistry. Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the metallic elements and their compounds. Second term.

3. Qualitative Analysis. In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required. Third term, prerequisite, Courses 1 and 2.

4, 5, 6. Quantitative Analysis. This course, extending through the year, aims to acquaint the student with the methods of analysis used in different chemical determinations.

(1) In the first term Gravimetric and Volumetric analyses are made with pure chemicals to acquire principles and methods.

(2) In the second term, Standardization, rock ore alloy and water are studied.

(3) In the third term, Fire, Gas and Electro-chemical methods are practiced.

7, 8, 9. Organic Chemistry. Prerequisites, courses 1, 2, and 3. Five hours a week; laboratory six hours.

(1) First term. The saturated hydrocarbons and their derivatives are studied with special regard to constitution. Pure organic compounds are prepared in the laboratory and their reactions investigated. Ultimate organic analysis begun; Cairus' determinations.

(2) Second term. The unsaturated hydrocarbons of the olefine and acetylene series and their derivatives are studied. Later, carbohydrates, ureids, etc., are taken up. Stereo-chemistry. In the laboratory, more preparations are made and ultimate organic analysis continued with determination of nitrogen, carbon, and hydrogen.

(3) Third term. The aromatic hydrocarbons and their derivatives are studied. Later; polycyclic and heterocyclic compounds; terpens and camphors are taken up. In the laboratory, preparations

of comparative difficulty are made and ultimate organic analysis continued with electro-combustions.

(4) **Organic Preparations.** Prerequisites, Organic Chemistry. A laboratory course of fifteen hours per week, designed to give technic in organo-synthesis. Written reports with critical discussions of reactions, methods, etc., are required for all preparations.

(5) **Organic Preparations.** A laboratory course of fifteen hours per week. Written reports required as in IV. Dyes are prepared during the first part of the term, and sugars and related compounds are later taken up.

10, 11, 12. **Physical Chemistry.** Prerequisites, Chemistry 1, 2, 3, 4, 5, and 6; Physics 23, 24, and 25. Calculus.

Five hours per week. Laboratory six hours. Written reports with critical discussions required for all experiments.

(1) First term. Gases and gas law, kinetic theory of gases, solubility, the phase rule, equilibria, etc., are studied. Thermodynamics introduced.

Laboratory determinations of density, viscosity, molecular rotation and refraction, solubility, partition, and vapor pressure are made.

(2) Second term. Thermo-chemistry, solution, osmotic pressure, and balanced actions are first studied. Later, the theoretical part of electro-chemistry is begun. Chemical statics and dynamics continued.

The laboratory work consists of determinations in thermometry, calorimetry; of molecular weights, and velocities of reactions.

(3) Third term. Electro-chemistry. Theoretical electro-chemistry is continued and technical subjects are studied. Conductivity, migration of iron, electromotive force, and polarization are studied in detail. Experiments on these subjects constitute the laboratory work.

13, 14, 15. **Chemical Preparations.** Prerequisites, Courses 1, 2, and 3. Laboratory course; ten hours per week.

(1) First term. Inorganic substances are prepared and purified. Underlying principles of methods are emphasized in the written reports required for all preparations.

(2) Second term. Fifteen hours per week. Preparations of some difficulty are now made. In the second half of the term compounds of the rare earths are prepared and their reactions studied.

(3) **Electro-synthesis.** Third term. Inorganic and Organic compounds are synthesized with the aid of the electric current. Relations of yield to temperature, current density, etc., are taken up in detail by the student in the written reports.

16. Industrial Chemistry. A series of lectures and recitations upon the most important technical chemical operations exclusive of metallurgy. A study of the application of chemical principles, technical processes, and the mechanical method of applying these principles. Supplemented by visits to plants in operation. This includes the study of the manufacture of Acids, Alkalies, Glass, Cement, Explosives, Textiles, Paper, the Refining of Oil, etc. Two hours per week, throughout the year. Prerequisites, Courses 1, 2, and 3.

17. Metallurgy. The manufacture and properties of iron and steel are studied and the influence of carbon, silicon, phosphorus, sulphur and other elements. Laboratory work consists in determining these elements and studying the structure under the microscope. Glass blowing and manipulation are also taken up. Laboratory work, eight hours a week. Prerequisites, Courses 1, 2, and 3.

18. Agricultural Chemistry. The chemistry of plants and fertilizers is studied. Fertilizer and food analysis is practiced in the laboratory six hours a week. This course covers the legal requirements for teachers of Pennsylvania high schools. Prerequisites, Courses 1, 2, and 3.

19. German Chemical Literature. One hour a week, throughout the year. Prerequisites, at least two terms of German, and Courses 1, 2, and 3 in chemistry.

Selections from standard German text-books and periodicals are read, and study is made of the derivation and formation of scientific words.

20. Physical Chemistry. Mathematical topics.

21. Organic Research.

22. History of Chemistry.

XIII. DEPARTMENT OF BIOLOGY.

NELSON FITHIAN DAVIS, SC.D., PROFESSOR OF BIOLOGY.

NORMAN HAMILTON STEWART, A.B., SC.M.,
ASSISTANT PROFESSOR OF BIOLOGY.

JOHN WINTER RICE,
SAMUEL MARSHALL DAVENPORT,
ASSISTANTS IN BIOLOGY.

It is the constant aim in this department to teach how to interpret nature. The student is guided in his investigations by lectures and laboratory manuals.

1. **Animal Physiology.** The aim of this course is to acquaint the student with the elementary facts concerning the functions of the human body. The work consists of lectures and readings from text-books on Physiology. The course is intended for those who wish a general knowledge of Physiology.

2. **Physiological and Experimental Psychology.** Elective to Seniors and Juniors.

3. **Comparative Psychology.** Text-book, reports Elective to Seniors and Juniors.

4. **Sanitary Science.** Lectures, one hour a week through the year.

5. **Human Osteology and Comparative Anatomy.** Recitations and dissections. In this course the student makes a systematic study of the human skeleton. The structure of the composite bones is compared to those of other vertebrates.

6a. **Human Anatomy.** Lectures, recitations, and dissections. The student has an opportunity to make a complete dissection of the entire human body. The work is largely independent. Models and text-books are used as guides.

6b. A second course, similar to 6a.

7. **Normal Histology (a).** Recitations and lectures, and laboratory work. In this course the student makes a thorough study of the microscopic structure of the cell and elementary tissues, followed by the study of the various organs of mammals. In the laboratory work the students prepare specimens by the various methods in fixing, hardening, straining and sectioning.

8. **Normal Histology (b).** A continuation of Course 7.

9. **Embryology.** Recitations, lectures, and laboratory work. This course is important because it gives a key to the interpretation of the structure and relationship of the parts of the animal body, and because it investigates the development of the individual. It includes the early development of amphibians, birds and mammals.

10. **Biology.** Recitations and dissections. The aim of this course is to meet the needs of general education in this subject, and at the same time makes clear the fundamental principles, scope, method, history, and subdivisions of Biology and its relations to other sciences.

11. **Invertebrate Zoölogy.** Recitations and dissections. This course succeeds the Course in Biology. It takes up the study and

dissection of representatives of the invertebrate groups, including their life history, habits, and distribution.

12. Vertebrate Zoölogy. Recitations and dissections. This is a continuation of Course 10. It completes a general survey of the animal kingdom, special attention being given by each student to dissections, anatomy, life histories, and habits of the various groups.

13. Philosophy of Zoölogy. Lectures and discussions. The evolution of the animal kingdom is traced and much time is given to the relation of evolution to thought. The principal facts and problems of variation and heredity are dealt with.

14. Entomology. Recitations and laboratory work. In this course each student makes a thorough study of the dissection, life history, and habits of insects representative of the different orders. Special attention is given to the economical importance and relation of insects to agriculture.

15. Heredity. Minor course. The lectures and reports deal with the principal facts and problems of variation and heredity and are supplemented by collateral readings.

16. Phænogamic Botany. Recitations, lectures, and field work. This is a general course including the anatomy of the representative types and their relation to the environment; a study is made of the local flora.

17. Cryptogamic Botany. Recitations, lectures, and field work. This includes a general introduction to Botany, taking up the study of at least one plant from each of the groups, and working out their life histories. The laboratory work and lectures develop the subject from the evolutionary standpoint.

18. Elements of Forestry. A course covering the factors that control and regulate the development of our forests.

19. Bacteriology. Recitations, lectures, and laboratory work. The laboratory work includes the practice of the essential bacteriological methods. Much time is given to the study of bacteria found in water and in milk.

20. Mineralogy and Geology. Recitations, lectures, and laboratory work. A general course intended to give the leading facts and principles of Geology and the more important events in the Geological history of the earth. The development of the North American continent is studied in detail.

21. Economic Geology. Recitations, lectures, and laboratory work.

22. German Biological Literature. Junior year, one hour throughout the year.

MEDICAL PREPARATORY DEPARTMENT.

The student can select from the medical subjects offered at Bucknell University such as will be required for advanced standing in the Medical College in which he may wish to complete his studies for the degree in medicine, and if his standing in such subject averages not less than nine, he will receive from the Department of Medicine in Bucknell University a Certificate of proficiency in those subjects and in such other subjects related to medical studies as he may have completed at Bucknell. These subjects are open only to students in the College of Liberal Arts, and the Certificate of proficiency is given to students only upon graduation, and in addition to the Diploma of the College of Liberal Arts.

THE BIOLOGICAL LABORATORY.

The Biological Laboratory is equipped with apparatus for carrying on the work in the Organic Sciences. A large room has been fitted up especially for Microscopic work with equipments for students. Each student has a separate desk containing a microscope and the necessary reagents. The Laboratory is also supplied with collecting and bacteriological apparatus, with books of reference, and other appliances necessary for carrying on Biological research. Those taking Microscopy have the use of microtomes, incubators, reagents, etc. New apparatus is added as occasion demands. The work in Zoölogy is illustrated by marine and freshwater forms, skeletons, and mounted specimens. In comparative Anatomy and Osteology the work is illustrated by skeletons representing different types of vertebrates. Physiology is illustrated with human skeleton, a life-sized French manikin, prepared tissue, and numerous charts. Material for Human Anatomy is received from the State Anatomical Board in Philadelphia, and each student has the opportunity to dissect the whole human body. The student in Histology and Embryology has a good supply of paraffin and collodion blocks. The work is illustrated with microscopic slides, alcoholic material, and French wax models. Each student is provided with dissecting instruments.

THE MUSEUM.

PROFESSOR NELSON FITHIAN DAVIS, SC.D., CURATOR.

The University possesses good collections of illustrative material in Botany, Zoölogy, Histology, Geology, Mineralogy, and Materia

Medica. Parts of these collections are kept in the laboratories and used in classroom work.

Since the erection of the Carnegie Library two large rooms in this building have been set aside as a museum, and the principal collections have been transferred from the Main College to these rooms. A special effort is being made to secure additions to the museum and objects will be thankfully received; especially such as can be used in laboratory work. Among these may be mentioned: marine and fresh-water forms of life; insects; skeletons of vertebrates; birds and mammals; botanical specimens; crystallized minerals and rocks.

A large collection now owned by the University consists of minerals and rocks, fossils, and Indian antiquities. It is especially desired to secure collections to illustrate the geology, minerals, flora, and fauna of Pennsylvania. Recently attention has been given to increasing the collection of Pennsylvania birds, and it is hoped that within a short time the University may possess a good series of mammals also.

ART COLLECTION.

A room in the Carnegie Library, ninety feet long, has been set aside for the Art Collection. The collection consists of about one thousand specimens of paintings, casts, engravings, and heliotypes, and furnishes valuable aid in illustrating the principles and history of painting and sculpture.

A course of lectures is given yearly to students of the Sophomore class on the History of Art.

THE LIBRARIES AND READING ROOMS.

PROFESSOR WILLIAM E. MARTIN, A.M., LIBRARIAN.

MARY STONER GRETZINGER, CURATOR.

LEWIS A. EYSTER AND MARGARET GEISSENHAINER MATTERN,
ASSISTANTS.

The College Library. The general Library contains over thirty thousand volumes, besides many thousand pamphlets. The reading room is connected with the Library, and offers facilities for reading, studying, and writing. During term time both are open forenoon and afternoon of each day, Sundays and holidays excepted, and both are maintained without extra charge to students. Students in all departments have free access to the shelves, and may draw two books

at one time and retain them for two weeks, with the privilege of one renewal, if desired.

For greater convenience of instructors and students, collections of special technical books are also kept in the Laboratories of the Physical and Organic Sciences, and in the Astronomical Observatory.

The Library is regarded as a working laboratory for all departments of instruction, students being constantly cited to it in classroom work. In this way, while answering the purpose of general culture, it supplements in great measure the monographic treatment of text-book study, and the student is trained under competent guidance to become an investigator. The resulting practical acquaintance with books and bibliography proves a valuable part of liberal education.

The Carnegie building for the accommodation of the Library was erected in 1905, the gift of Hon. Andrew Carnegie, D.C.L.

By aid of the Card Catalogue and Poole's Index to Periodicals, all the resources of the Library on any given subject are at once available.

Gifts to the Library of money and of books will be thankfully acknowledged by the librarian.

CLASS ORGANIZATION.

Each class is organized with a president and other usual officers. The classes meet for the election of officers on the first Friday of the school year, at three o'clock in the afternoon. The officers then elected serve until their successors qualify. The officers elected on that date by the Freshman class serve until Matriculation day, when permanent officers are elected.

FRATERNITIES.

No student is permitted to join a fraternity until he has received a certificate from the President of the University, under seal that he has been a student for one year in the College, that he has completed one year's work and that his conduct has been satisfactory.

GENERAL COLLEGE ORDERS.

ATTENDANCE.

Only under exceptional circumstances will excuses be granted to leave College during term time. In such cases the examination on the studies gone over by the class, during a student's absence, will be especially searching, and a high degree of attainment will be required. When a student is absent more than one fourth of the term for any reason, he is required to stand private examination in addition to the examination required of the class. One who is absent during the entire term must also necessarily lose his standing in his class. The work of the term begins on the day of opening, and recitations are expected at the first hour appointed for the meeting of the classes. The work continues uninterruptedly, with the exception of holidays marked in the Calendar, until the last day of the term.

STANDING.

Each instructor records, in numbers ranging from 0 to 10, the character of the recitation of every student reciting to him, and notes also any delinquency in conduct and attendance. The weekly summary of these markings is recorded in permanent books, and constitutes the basis for determining the standing of the student during his connection with the institution. For unexcused absences from recitations one tenth is deducted from the general term average for each absence. *Excused* absences have half the effect in lowering a student's standing as unexcused absences, but a student may, at the option of the professor, do supplementary work to obviate the effect upon his standing of excused absences. At the close of each term an average of these marks is made out, and, if the student's financial obligations to the institution have been met, a report of the scholarship, attendance, and conduct of each student is transmitted to his parent or guardian by the President. No student is advanced from one class to another whose average in any study is less than 7; nor is any student recommended to the Board of Trustees for graduation in the General Courses if his average standing during either his Freshman or Sophomore year is below 8; or if in his Junior year it is below

8.5; or if in his Senior year it is below 9. The passing grade for graduate students is 9. No one will be recommended for graduation in the Courses of Jurisprudence, Biology, Chemistry, and in Civil, Electrical, or Mechanical Engineering, nor be granted a certificate in the Law or Medical studies, if his average is below 9.

Conditioned students are not recommended to the Board of Trustees for promotion. Students conditioned on entrance must discharge such conditions within the first year thereafter.

If the student has failed in the studies of a term, he will not be permitted to enter upon the studies of a subsequent term until he has passed in the subjects in which he failed, unless a postponement of examination to a definite time is granted by the Faculty.

Appointments in the Graduating Class are made according to the aggregate standing of each member during his entire course. But in assigning these parts the Faculty takes into account the deportment of the student, as well as marks for recitations. The minimum average for an Oration of the First Class is fixed at 9, and for the Oration of the Second Class at 8.

Students who attain an average of 9.4 or more for their entire course are graduated *summa cum laude*; students who attain an average of 9.2 or more are graduated *magna cum laude*; those who attain an average of 9 or more are graduated *cum laude*.

EXAMINATIONS.

The dates of the examination are given in the Calendar. In case a student fails to be present at the examination of his class, for any justifiable reason, his examination will be held at such time as the Faculty may appoint, but in no case is an examination granted a student in advance of the time appointed for the examination of the class.

Unless for very good reasons to the contrary, a student who is granted a special examination will be required to pay a fee of five dollars therefor.

PUBLIC WORSHIP.

The College duties of each day are opened with religious services at Bucknell Hall, which all the students of the College are required to attend.

Attendance upon public worship in some church in town on Sunday morning is required. Students are required to attend the religious services held on Thanksgiving Day.

On the Day of Prayer for Colleges, a sermon is preached by the President, or by some one at his request. All the students are required to attend.

GOVERNMENT.

It is assumed that all who enter the courses of study in the College do so for the purpose of acquiring an education, not only of the intellect, but also of character. The Laws of the College, enacted by the Board of Trustees, are as few and simple as the proper regulation of a community of young men will permit. These are printed, and a copy is placed in the hands of every student at the beginning of each year. These laws must be observed, not only in their letter, but in their spirit. The atmosphere of the institution is not that of arbitrary restraint, but of reasonable conformity to reasonable laws. The College does not wish to place its stamp or bestow its honors upon any one who is not willing to deport himself as a gentleman. Each student is distinctly placed upon his manhood, and if he abuses his privileges, after reasonable caution, he must withdraw from the institution, at the request of the President.

PRESIDENT'S OFFICE HOURS.

The President of the University is in his office in the Main College building, every Tuesday, from 9.30 A. M. to 12 noon, to confer with students who may desire advice or assistance. Students are encouraged to communicate frankly with the President upon any subject in which he may be of help to them.

OFFICE HOURS FOR THE COLLEGE WOMEN.

The Dean of the Women's Department will meet in his office College women who may desire advice or assistance from him.

VOLUNTARY SOCIETIES.

The Young Men's Christian Association is formed of students of the College. It receives religious periodicals and corresponds with kindred societies. A hall has been appropriated to the Society, and has been suitably furnished for religious meetings.

The Young Women's Christian Association, a voluntary society open to the officers and students of the College and Institute, meets weekly. The regular Tuesday evening prayer meeting, missionary

and temperance work, special Bible Classes and College Settlement Work are in charge of this Association.

Euepia; Theta Alpha. These are the two Literary Societies of the College for men. They hold meetings for Orations, Essays, and Debates. Each Society has a convenient hall, and by an arrangement of the Faculty will always have a nearly equal number of members.

The Zeta Literary Society is composed of young women admitted to any of the courses in the College.

The Students' Publication Association is an organization which has in charge the issuing of the *Bucknell Mirror*. This periodical appears monthly during the collegiate year. The same Association publishes the *Commencement News* daily during Commencement week.

Another association of students publishes, weekly, during the school year, the *Orange and Blue*.

The Athletic Association of the College has been formed to encourage and regulate athletic sports. Considerable liberty is allowed the Association in carrying out its purpose. The Association is not allowed, however, to arrange match games with other similar bodies without having secured the consent of the Faculty. Subject to the control of the Faculty, the general management of athletics is managed by an Executive Board, consisting of three members elected by the Faculty, two by the Alumni Association, and two by the Athletic Association of students.

No student who is deficient in rhetorical or classroom work in any term shall be eligible to the office of manager or director in any student organization, or to be a member of any exhibiting organization, or of any contesting athletic team, or of any publishing or editing board during any subsequent term until such deficiency is made up.

HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium has been provided for the physical training and development of young men. Young women have opportunity for physical training in the Calisthenium of the Women's College. These are now provided with the apparatus usually found in well-furnished gymnasiums. The Directors of the Gymnasium examine every student, taking and recording in a book his physical measurements, and prescribe such exercise as may be required for his physical development. Regular exercise in the Gymnasium is required of students during the winter term.

AIDS AND HONORS.

PRIZES.

The prizes are awarded to the persons who in the judgment of the several committees attain the highest degree of excellence among the respective competitors, but no prize is bestowed unless a high degree of merit has been attained by the person receiving it.

THE PRIZE OF THE CLASS OF '71.

This prize, established by the Class of 1871, is awarded to the student of the Freshman Class who shall prove himself best prepared for College in the two branches, Latin and Mathematics, and who shall have received his preparatory training at Bucknell Academy.

The prize for 1914 was awarded to Raleigh Milton Felton.

THE FRESHMAN DECLAMATION PRIZE.

A prize is awarded to the member of the Freshman Class who shall excel in declamation at the Annual Contest of the Freshman Class.

The prize for 1914 was awarded to Charles Austin Soars.

THE SOPHOMORE DECLAMATION PRIZE.

A prize is awarded to the member of the Sophomore Class who shall excel in declamation at the Annual Contest of the Sophomore Class.

The prize for 1914 was awarded to Robert Thomas Harris and Wade Francis Blackburn.

DECLAMATION PRIZES FOR WOMEN.

Prizes for the best declamation are open for competition to the Sophomore and Freshman Classes. The prize for the Freshman Class was awarded, in 1914, to Ruth Pauline Barthold.

THE REGISTRAR'S PRIZE.

The Registrar of the University offers a prize to that member of the Junior Class who shall pronounce the best oration at the Junior Exhibition in Oratory.

The Junior oratorical prize was awarded in 1914 to Edward Oliver Clark.

The corresponding prize for women was awarded in 1914 to Florence Brown Barber.

THE JUNIOR DEBATE PRIZE.

Prizes are awarded to the two members of the Junior Class who evince superiority in debate at the Junior prize contest.

The prize was awarded in 1914 to Edward Lloyd Rogers, first, and Edward Oliver Clark, second.

THE HERBERT TUSTIN PRIZE.

In memory of his deceased son, the late Professor Francis Wayland Tustin, Ph.D., of the Class of 1856, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT TUSTIN PRIZE FUND, the interest of which is to be forever paid annually as two prizes, in the proportion of fifteen dollars for the First Prize, and of ten dollars for the Second Prize, to the two students of the Senior Class who shall have attained the highest and the second highest standing in Psychology and Ethics (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The first prize was awarded in 1914 to Cheney Kimber Boyer and the second to Walter William Harris.

THE HERBERT GOODMAN BARROWS PRIZE.

In memory of his son, the Reverend William Barrows, A.M., of the Class of 1867, paid to the Trustees of the University the sum of five hundred dollars, "as the foundation of the HERBERT GOODMAN BARROWS PRIZE FUND, the interest of which is to be forever paid annually as two prizes of equal amounts to the student or two students of the Senior Class who shall have attained the highest standing, respectively, in the Latin and in the Greek language and literature (under such regulations for the pursuit of these studies as the Faculty of the College shall prescribe from time to time), and whose conduct for the last two years of their course in College shall have been without exception."

The prize for excellence in Greek was awarded in 1914 to Edna Miller; the prize for excellence in Latin was awarded in 1914 to Frank Russell Hamblin.

THE CHAPLAIN J. J. KANE PRIZE.

The Reverend James J. Kane, A.M., Chaplain in the United States Navy, and a graduate from the Theological Department of this University, of the Class of 1867, has established a prize which is to be given annually to that member of the graduating class who delivers the best oration on Commencement Day.

The prize was awarded in 1914 to Edward John Richards.

SCHOLARSHIPS.

I. BUCKNELL SCHOLARSHIPS.

The William Bucknell Scholarships, twenty in number and of \$1,000 each, were established for the purpose of aiding worthy young men in securing an education which will increase their usefulness in life. The income from this fund is to be paid annually to twenty young men, in accordance with the rules which will be made known upon application to the Committee of Examination, consisting of the President of the University, H. S. Hopper, Esq., and Professor Rockwood.

II. SCHOLARSHIPS FOR MINISTERS' CHILDREN.

Scholarships upon the general foundation have been established for the children of ministers of the Gospel, of all denominations, in active service.

III. THE LIVINGSTON SCHOLARSHIPS.

Established from a legacy of M. B. Livingston, twenty-two in number, are available for students for the ministry.

IV. THE LONGAN SCHOLARSHIP.

The Longan Scholarship, established from a legacy of O. W. Longan, Esq., is available for a student for the ministry from Lycoming County, Pennsylvania.

V. THE LEWIS E. JONES SCHOLARSHIP.

Established from a legacy of the late Lewis E. Jones, and is available for students of Welsh descent to the amount of the income from five hundred dollars.

VI. THE JOHN HOWARD HARE SCHOLARSHIP.

Established by the Reverend Calvin Aurand Hare, A.M., in memory of his son, John Howard Hare, available for a student for the ministry upon recommendation of the Pennsylvania Baptist Education Society and the President of the University.

VII. THE VELOLA E. HALL SCHOLARSHIP.

Established by the Reverend Henry Chandler Hall, A.M., Class of 1882, in memory of his daughter, Velola E. Hall, A.B., Class of 1904, available for a student in the Women's College.

VIII. THE WILLIAM V. WILSON SCHOLARSHIP.

The William V. Wilson Scholarship was established in memory of the Reverend William V. Wilson, D.D., of New Jersey.

IX. THE PHILADELPHIA ALUMNÆ SCHOLARSHIP.

This scholarship, founded by the Philadelphia Alumnæ Club, is available for a woman student from Philadelphia.

X. THE MEDICO-CHIRURGICAL SCHOLARSHIP.

The Medico-Chirurgical Medical College of Philadelphia offers a scholarship covering tuition in that college to the student from Bucknell University who evinces the best preparation and aptitude for medical work.

XI. THE GENERAL MILLER SCHOLARSHIPS.

Ten scholarships have been established by Major-General Charles Miller, A.M., to be awarded to worthy members of the graduating class.

XII. ANNUAL SCHOLARSHIPS.

A number of persons have established annual scholarships for the aid of young men or women attending college. Information concerning annual scholarships can be obtained from the President of the University.

EXTRA STUDIES.

In order to promote special scholarships in the several departments of study, the following provision has been made:

1. Any student who has obtained an average of 9 in the studies of the previous term may take special work in any department of the College under the direction of the Professor of that department.

2. Such work must be assigned by the Professor, and the method of study prescribed by him.

3. If the student shall attain an aggregate average of 9 in all the studies of the current term, and pass a satisfactory examination in the voluntary study, the work shall be credited to him.

4. Only one such study may be pursued by any one student during any one term. A student may also take two such minor studies or one such major study in the Summer vacation.

5. The Professor with whom the student is working shall have the privilege of requiring a partial examination on the work done at any time during the term, and there may be regular recitations at the Professor's option.

6. The amount and quality of minor work shall be taken into account in awarding honors at graduation, but is not counted toward any degree.

EXPENSES.

The College charges amount to \$150 per annum, for those who room in the College buildings, and \$140 for those who room in the town. The College charges include library fee, gymnasium fee, and other incidental fees common to all students, as well as Tuition. Tuition is rated at \$50 per annum, and is included in the College charges. Students in the Course in Civil, Electrical or Mechanical Engineering are charged \$5 per term extra. Students in the other Courses who take an engineering subject are charged the same rates as students in engineering. This charge is for the regular work; when a fourth study is taken, an extra charge of \$10 is made. Graduation fee and diploma, \$10. Masters' Degree and Diploma, \$10.

The Study Rooms in the Main College are so arranged that two students occupy the same study. The Dormitories are intended to accommodate only one person, so that each student has his own private sleeping room. These are furnished with spring bedsteads. The student must supply himself with all other furniture. Students are responsible for damages to their rooms, whether it be done when they are present in the room or absent from it.

If a student occupy a study by himself, the charges for room-rent and private fuel will be doubled.

An extra charge is made for electric lighting of private rooms.

An extra charge ranging from \$5 to \$10 per term is also charged for rooms in the East and in the West College.

An additional charge is made for rooms cared for by the Institution.

Young men in the Collegiate Department, who so desire, can have furnished rooms in the West College, with board in the Academy.

Young women in the Collegiate Department room and board in the Women's College. The standard annual charge for board, tuition, furnished room, heating, lighting, is \$325. An extra charge for choice rooms in the Bucknell Cottage and in New Cottage, ranging from \$5 to \$10 per term, is made.

The assignment of rooms is for one year, and is made the first Monday morning in June, immediately after the devotional exercises in Bucknell Hall. Students from a distance will save inconvenience by applying to the Registrar for a room before the term opens. A deposit of \$10 is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

In the Laboratories students pay for chemicals used and for apparatus broken or damaged. In the chemical laboratory \$5 per term is charged for gas, water, and general chemicals for each course, except Courses 1 and 2, for which the charge is \$2.50. A deposit of \$5 per course is required to cover breakage and cost of extra chemicals.

A small fee is charged also in each of the elective courses in the departments of Mechanics and of Organic Science and in Surveying and Engineering, for the use of instruments and for material used.

Before entering upon the experimental courses students must deposit with the Registrar security for materials used.

These charges must be paid in advance at the beginning of each term.

No student is entitled to his place in his class until he has made settlement with the Registrar.

Men students can board in clubs at a cost of from \$2.50 to \$3 per week. Boarding can be obtained in private families at \$4 or \$5 per week, or at the table of the Bucknell Academy at \$4 per week. No self-boarding is allowed in the College buildings.

SIXTY-FOURTH ANNUAL COMMENCEMENT.

WEDNESDAY, JUNE 17, 1914.

HONORS AT GRADUATION.

ORATIONS SUMMA CUM LAUDE.

CHENEY KIMBER BOYER,
MINNIE IOLA ETZWEILER,
WILLIAM HENRY EYSTER,
FRANK RUSSELL HAMBLIN,
WALTER WILLIAM HARRIS,
CHARLES WALTER LOTTE,

RALPH HERMAN MOORE,
JOHN WINTER RICE,
EDWARD JOHN RICHARDS,
KARL WHITMAN RIPPEN,
HELEN BOTTORF WAITE,
SAMUEL LEIDY WILSON.

ORATIONS MAGNA CUM LAUDE.

EARLE BUDD ARMSTRONG,
GUY CLEVELAND BROSIUS,
CLARENCE BARNABAS CARVER,
OLIVE MANSFIELD COOPER,
ROBERT JOHN CRANE,
JOHN LUKE GEHMAN,
GEORGE THOMAS GROVE,
EUDORA REGINA HAMLER,

LELAND PROBASCO LANING,
SAMUEL HARRISON MARKOWITZ,
FRANCES TERRY MCNALL,
EDNA AMELIA MILLER,
HELEN GRIFFIN OTT,
ETHEL ELIZABETH PETERSON,
FRED OSCAR SCHNURE,
LEVI HUBBARD SHATTUCK,

ALFRED SMITH VANOSTEN.

ORATIONS CUM LAUDE.

RAYMOND LANCE APGAR,
NEVIN GEORGE BACHMAN,
H. WALTER BAKER,
DANIEL FLOYD KLINE BERTOLETTE,
LOUIS HENRY BOYER,
HARRY EARLE CAMPBELL,
DAYTON THOMAS CORSON,
SAMUEL HENRY COULTER,
RACHEL MIRIAM DAVIS,

HARRY DEWIRE,
HAROLD MACILVAINE DORRELL,
CHARLES BRYANT DRAKE,
RUTH HORTENSE EDWARDS,
JASPER C. FRANTZ,
JOSHUA ROBERT GOLIGHTLY,
ROBERT CLARK HAGAN,
JOSEPH MUR HILLMAN,
JAMES RALPH IRWIN,

MILDRED RUTH KIRK,	MARIAN ESTHER SHIVERS,
WILMA HARRIETTE SPEERS KNAPP,	CLINTON FRANCIS SNYDER,
RALPH WARREN KUNKLE,	HARRY SYLVESTER STAHLER,
HENRY GEORGE KUYL,	VICTOR FRANCIS SWENSON,
HOWARD BURTON MUSSER,	HARRY BRUNGART WEAVER,
LUCILE ELIZABETH OWENS,	ALVA MCGREGOR WELCHONS,
WILLIAM DEAN READING,	NORMAN WILLMER WHITED,
FLORENCE ISABELLE REIMENSNYDER,	EDNA ALICE WHITTAM,
JOHN FRANCIS WINKELBLECH.	

DEGREES CONFERRED *PRO MERITO*.

WEDNESDAY, JUNE 17, 1914.

A. DEGREES IN ARTS.

MASTER OF ARTS.

HARRY S. BOURNE, PH.B.,	COLEMAN JOHN HARRIS, A.B.,
KATHERINE DILL BROWN, A.B.,	WALTER WILLIAM HARRIS, A.B.,
ANSLEY B. CLAYPOOLE, A.B., B.D.,	JOHN ELIJAH KAUFFMAN, A.B.,
DAVID FORREST DUNKLE, A.B.,	ELLEN WEBSTER MARTIEN, A.B.,
MINNIE IOLA ETZWEILER, A.B.,	ANDREW EDGAR SABLE, SC.B.,
HOWARD V. FISHER, SC.B., LL.B.,	MAX CONRAD WIAINT, PH.B.

MASTER OF SCIENCE.

CHARLES H. BALDWIN, SC.B.,	CLARA SENORA SHELLHAMMER, SC.B.,
ROBERT WILLIAM MEYER, PH.B.,	HARRY SCHEIDY EVERETT, A.M.

BACHELOR OF ARTS.

DANIEL FLOYD K. BERTOLETTE,	JASPER C. FRANTZ,
(Jurisprudence).	JOHN LUKE GEHMAN,
CHENEY KIMBER BOYER,	ROBERT CLARKE HAGAN,
GUY CLEVELAND BROSIUS,	(Jurisprudence),
OLIVE MANSFIELD COOPER,	FRANK RUSSELL HAMBLIN,
SAMUEL HENRY COULTER,	MARIAN KATHRYN HARMAN,
RUTH HORTENSE EDWARDS,	WALTER WILLIAM HARRIS,
MINNIE IOLA ETZWEILER,	MILDRED RUTH KIRK,
WILLIAM HENRY EYSTER,	MARY ANNA KUNKLE,
ELLEN WOLFE FOCHT,	CHARLES WALTER LOTTE,

SAMUEL HARRISON MARKOWITZ,	JESSE EARLE RILEY,
ROBERT RAY McCOMBS,	LEVI HUBBARD SHATTUCK,
FRANCES TERRY McNALL,	(Jurisprudence),
EDNA AMELIA MILLER,	MARIAN ESTHER SHIVERS,
RALPH HERMAN MOORE,	HARRY SYLVESTER STAHLER,
HOWARD BURTON MUSSER,	(Jurisprudence),
(Jurisprudence),	HELEN GLAZE STOUT,
HELEN GRIFFIN OTT,	ALFRED SMITH VANOSTEN,
ETHEL ELIZABETH PETERSON,	HELEN BOTTORF WAITE,
FLORENCE ISABELLE REIMENSNYDER,	EDNA ALICE WHITTAM,
EDWARD JOHN RICHARDS,	JOHN FRANCIS WINKELBLECH.
(Jurisprudence),	

BACHELOR OF PHILOSOPHY.

GEORGE NEVIN BACHMAN,	DOROTHEA MARGUERITE JONES,
RACHEL MIRIAM DAVIS,	JOSEPH FREDERIC McMURRAY,
HAROLD McILVAIN DORRELL,	JOHN GRANVILLE SCOUTON,
MIRIAM RUTH HOFFA,	HARRY BRUNGART WEAVER.

BACHELOR OF SCIENCE.

DALE REESE ANGSTADT,	LUCILE ELIZABETH OWENS,
FREEDMAN HOLMES CATHRALL,	HAROLD EVANS POWELL,
HARRY DEWIRE,	WILLIAM DEAN READING,
EUDORA REGINA HAMLER,	JOHN WINTER RICE,
WILMA HARRIETTE SPEERS KNAPP,	RAYMOND BEAUMONT STAPLETON,
RALPH WARREN KUNKLE,	ALVIA MCGREGOR WELCHONS,
WALLACE KLINE LOWTHER,	SAMUEL LEIDY WILSON,
RAYMOND FORD NICHOLS,	DORRANCE DANA ZINN.

BACHELOR OF SCIENCE IN BIOLOGY.

HENRY WALTER BAKER,	RALPH EMERSON BELL,
ALBERT DONALD GRAY.	

FIRST DEGREE IN CHEMICAL ENGINEERING.

CHARLES JACOB APPLGATE,	HARRY EARLE CAMPBELL,
EARLE BUDD ARMSTRONG,	CLINTON FRANCIS SNYDER,
FRANK BEACHAM WORRILOW.	

FIRST DEGREE IN CIVIL ENGINEERING.

LOUIS HENRY BOYER,	GEORGE THOMAS GROVE,
CLARENCE BARNABAS CARVER,	HENRY GEORGE KUYL,
DAYTON THOMAS CORSON,	LELAND PROBASCO LANING,
ROBERT JOHN CRANE,	ARTHUR SAWYER MAHONEY,
CHARLES BRYANT DRAKE,	THOMAS EDWARD MOORE,
JOSHUA ROBERT GOLIGHTLY,	WILLIAM STANLEY REITZ,
NORMAN WILLMER WHITED.	

FIRST DEGREE IN ELECTRICAL ENGINEERING.

RAYMOND LANCE APGAR,	JAMES RALPH IRWIN,
JOHN RUSSELL CRISWELL,	ROBERT JOHN PARMENTER.
ROBERT WILLIAM EVERALL,	KARL WHITMAN RIPPEN,
ELMER ELLSWORTH FAIRCHILD,	FRED OSCAR SCHNURE,
EARL BALLARD GLOVER,	HAROLD AUGUSTUS SHAFFER,
JOSEPH MUR HILLMAN,	VICTOR FRANCIS SWENSON.

FIRST DEGREE IN MECHANICAL ENGINEERING.

CHARLES ELLSWORTH COLEMAN,	ERNEST OLOF LINDBERG,
LOUIS FREDERICK LYNE.	

COMMENCEMENT ADDRESSES.

Baccaulaureate Sermon.....	THE PRESIDENT
Sermon, Education Society.....	Rev. T. Carson Hanna, B.D.
Address before the Alumni Association....	THEO. A. K. GESSLER, D.D.
Poem before the Alumni Association,	
	LINCOLN HULLEY, PH.D., LITT.D., LL.D.
Annual Address.....	HON. MARTIN G. BRUMBAUGH, LL.D.
Commencement Address.....	THE PRESIDENT

TEACHERS' CERTIFICATES.

Teachers' Provisional Certificates of Pennsylvania are issued to graduates of Bucknell University good for three years; Permanent Certificates are issued upon three years' successful experience in teaching in the schools of the state. Teachers' Certificates are also issued to graduates of Bucknell University by the Department of Education, State of New York, State of New Jersey, and all other states which issue certificates to the graduates of any colleges.

NAMES OF STUDENTS.

GRADUATE STUDENTS.

NAME.	MAJOR SUBJECT.	RESIDENCE.
DANIEL FLOYD K. BERTOLETTE, A.B.,	<i>Literature.</i>	Shamrock
HARRY EDMUND BILGER, PH.B.,	<i>Civil Engineering.</i>	Springfield, Ill.
JOHN BENJAMIN BOYER, SC.B.,	<i>Science.</i>	Milroy
EDWIN CHARLES BRUSH, A.B.,	<i>Philosophy.</i>	Chester
CLARENCE BARNABAS CARVER, C.E.,	<i>Mathematics.</i>	Carmel, N. Y.
JOSEPH LESLIE CROWELL, A.B.,	<i>Philosophy.</i>	Barneгат, N. J.
RALPH FREDERICK DAVENPORT, PH.B.,	<i>Pedagogy.</i>	Carlisle
FRANK GARFIELD DAVIS, PH.B.,	<i>Pedagogy.</i>	Valdez, Alaska
MILES ELTON DEAN, A.B.,	<i>English.</i>	Altoona
ISAAC NEWTON EARLE, JR., A.B.,	<i>Greek.</i>	Iloilo, Philippine Islands
WALTER SAMUEL EISENMENGER, SC.B.,	<i>Chemistry.</i>	Rochester, N. Y.
FAYETTE CLINTON ESHELMAN, SC.B.,	<i>Biology.</i>	Philadelphia
WALTER SCOTT GEARHART, C.E.,	<i>Civil Engineering.</i>	Manhattan, Kan.
MARWOOD BENJAMIN GLOVER, SC.B.,	<i>Jurisprudence.</i>	Philadelphia
HARRY ELMER GRESS, SC.B.,	<i>Pedagogy.</i>	Monessen
HORACE LEROY HALL, A.B.,	<i>Philosophy.</i>	Chester

NAME.	MAJOR SUBJECT.	RESIDENCE.
FRANK RUSSELL HAMBLIN, A.B.,	<i>Modern Languages.</i>	Lewisburg
ORVILLE VANWICKLE HAWKINS, PH.B.,	<i>Jurisprudence.</i>	Freneau, N. J.
FRANK RAHN HEAN, A.B.,	<i>Jurisprudence.</i>	Philadelphia
FRANK MURRAY JENNER, PH.B.,	<i>Mathematics.</i>	Newark, N. Y.
HARRY XING KELLEY, A.B.,	<i>Languages.</i>	Factoryville
MARY ANNA KUNKLE, A.B.,	<i>Literature.</i>	Lewisburg
CHARLES WALTER LOTTE, A.B.,	<i>French.</i>	Paterson, N. J.
CHARLES STEPHEN MARSH, SC.B.,	<i>Education.</i>	Saltsburg
NORMAN GOULD OLIVER, A.B.,	<i>Philosophy.</i>	Evansville, Wis.
GEORGE WASHINGTON POTTS, A.B.,	<i>Science.</i>	Pittsburgh
JESSE EARL RILEY, A.B.,	<i>Economics.</i>	Philippi, W. Va.
FRED VALENTINE ROCKEY, A.B.,	<i>History.</i>	Liverpool
DAVIS CLIFFORD RUTH, A.B.,	<i>Latin.</i>	Philadelphia
CHARLES LOY SANDERS, A.B.,	<i>English.</i>	Germantown, Ohio
CLAY SHOEMAKER SANDERS, A.B.,	<i>Latin.</i>	Germantown, Ohio
PAUL JASPER SANDERS, A.B.,	<i>Science.</i>	Bethlehem
ROBERT ROWE SELLERS, SC.B.,	<i>Civil Engineering.</i>	Gainesville, Fla.
JOSEPH PARDOE SHEARER, SC.B.,	<i>Biology.</i>	Baltimore, Md.
CHESTER JOSEPH TERRILL, A.B.,	<i>Economics.</i>	Albany, N. Y.
JESSE ROY TYSON, SC.B.,	<i>Civil Engineering.</i>	Poughkeepsie, N. Y.
ALFRED SMITH VANOSTEN, A.B.,	<i>Pedagogy.</i>	Philadelphia

NAME.	MAJOR SUBJECT.	RESIDENCE.
ARTHUR DAVID WALTZ, SC.B.,	<i>Biology.</i>	Philadelphia
ALVIE MCGREGOR WELCHONS, SC.B.,	<i>Science.</i>	South Forks
SAMUEL KNOX WHITE, SC.B.,	<i>Jurisprudence.</i>	Bloomington, Ind.
JOHN J. WILLIAMS, SC.B.,	<i>Philosophy.</i>	Rochester, N. Y.
VIOLETTA WOLFE, PH.B.,	<i>German.</i>	Butler, N. J.

Graduate Students, 42.

THE SENIOR CLASS.

CLASS OF 1915.

NAME.	RESIDENCE.	ROOM.
WILLIAM ARISTA AFFRON,	<i>Sag Harbor, N. Y.</i>	No. 94, West College
JOSEPH WILLIAM ALESHOUCKAS,	<i>Great Neck, N. Y.</i>	No. 61, East College
MARION RUTH BANCROFT,	<i>Altoona.</i>	Women's College
FLORENCE BROWN BARBER,	<i>Lewisburg.</i>	South Second Street
FRANCES FOSTER BARBER,	<i>Lewisburg.</i>	South Second Street
JEREMIAH BUTLER BATES,	<i>Blossburg.</i>	No. 19, East Wing
MELVILLE BEARDSLEY,	<i>Philadelphia.</i>	No. 93, East College
ISABELLE FRANCES BOND,	<i>Lewisburg.</i>	South Seventh Street
WILLIAM ELTON BOTT,	<i>Wilmington, Del.</i>	No. 20, East Wing
MABEL PAULINE BOYER,	<i>Mt. Pleasant.</i>	Women's College
CHARLES WARREN BROWN,	<i>Lewisburg.</i>	Lewisburg
FRANCIS THEODORE BROWN,	<i>Lewisburg.</i>	Lewisburg
MABEL MAY BROWN,	<i>Clearfield.</i>	Women's College
MALCOLM BUFFINGTON,	<i>Brookville.</i>	No. 11, East College
FRED MEINZER BURLEW,	<i>Freneau, N. J.</i>	Walker Street
WILLIAM ADAM CAWLEY,	<i>Lewisburg.</i>	Lewisburg
EDGAR TILLMAN CLAPP,	<i>Milton.</i>	Lewisburg
ALBERT JOHN CLARK,	<i>Towson, Md.</i>	No. 17, East Wing
EDWARD OLIVER CLARK,	<i>Towson, Md.</i>	No. 17, East Wing

NAME.	RESIDENCE.	ROOM.
EDMUND BELFOUR CLINE,	<i>Saltsburg.</i>	No. 72, East College
HOPE CRAIG,	<i>Brackenridge.</i>	Women's College
NORRIS IRA CRAIG,	<i>Philadelphia.</i>	Lewisburg
RAYMOND E. CROSS,	<i>Middletown, N. Y.</i>	South Third Street
WALTER SUPPLEE CROUSE,	<i>Honey Brook</i>	No. 17, East Wing
EMMA ELIZABETH DILLON,	<i>Trenton, N. J.</i>	Lewisburg
IRA SYLVESTER DUNKLE,	<i>Lewisburg.</i>	Lewisburg
GARDNER WADE EARLE,	<i>Lewisburg.</i>	No. 1, East Wing
HAROLD CHARLES EDWARDS,	<i>Gouldsboro.</i>	No. 59, East College
HELEN HORTENSE EEDE,	<i>Ballston Spa, N. Y.</i>	Women's College
ARTHUR ELTON EVANS,	<i>Wilkes-Barre.</i>	No. 54, East College
FREDERICK HARRISON FAHRINGER,	<i>Sunbury.</i>	No. 58, West College
DAVID GERALD FITZGERALD,	<i>Lewisburg.</i>	No. 3, East Wing
JOSEPH FRANK GDANIEC,	<i>Mt. Carmel.</i>	No. 64, East College
CARL EDWARD GEIGER,	<i>Williamsport.</i>	No. 90, East College
SIDNEY GRABOWSKI,	<i>Nanticoke.</i>	No. 21 West College
MARGARET CHRISTINE GRETZINGER,	<i>Lewisburg.</i>	Lewisburg
CLAIR GEPHART GROOVER,	<i>Lewisburg.</i>	Lewisburg
CARRIE MARY JANE GRUGAN,	<i>West Milton.</i>	West Milton
ALBERT JOSEPH HAMLIN,	<i>Philadelphia.</i>	No. 120, East College
FRED TWINING HARRIS,	<i>Scruggsboro.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
JOHN WILLIAM HEDGE,	<i>Scenery Hill.</i>	No. 81, East College
GEORGE PENTELow HERN,	<i>Passaic, N. J.</i>	No. 10, West College
ROLAND KEILHOLTZ HOKE,	<i>Emmitsburg, Md.</i>	No. 91, East College
ROBERT P. HOPKINS,	<i>Carbondale.</i>	South Third Street
HUGH CHARLES HOUSER,	<i>Wellsboro,</i>	North Third Street
GEORGE ALLISON IRLAND,	<i>Lewisburg.</i>	Market Street
ROLAND MONROE JONES,	<i>Trevorton.</i>	No. 87, West College
PEARL IDA KAWEL,	<i>Sunbury.</i>	Sunbury
GEORGE THOMPSON KEECH,	<i>Netcong, N. J.</i>	No. 9, East Wing
WILLMON KEISER,	<i>Mt. Carmel.</i>	Lewisburg
HAROLD RICHARD KELLY,	<i>Titusville.</i>	Lewisburg
BENJAMIN WINTERS LAIDLAW,	<i>Orange, N. J.</i>	South Third Street
RAMONA LENINGTON,	<i>Scranton.</i>	Women's College
LEDA ALICE MACFARLAND,	<i>Milton.</i>	Milton
ESTHER MABEL MCCORMICK,	<i>Tyrone.</i>	Women's College
FRED FELTEN MELLOTT,	<i>Everett.</i>	No. 31, West College
GILBERT JUDSON MEREDITH, JR.,	<i>Felton, Del.</i>	No. 1, East Wing
CARLTON ALFRED MICHAEL,	<i>Factoryville.</i>	No. 15, West College
WINIFRED WILBUR MILLER,	<i>Bridgeton, N. J.</i>	Women's College
NORMAN MITTERLING,	<i>Sunbury.</i>	No. 23, West Wing
GEORGIANA MOORE,	<i>Juniata.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
WILLARD LESTER MOYER,	<i>Muncy.</i>	No. 59, West College
HAROLD STANLEY MYATT,	<i>Philadelphia.</i>	No. 22, East Wing
ROBERT ELSMERE OBERDORF,	<i>Sunbury.</i>	No. 61, West College
JESSIE MARGUERITE OSWALT,	<i>Altoona.</i>	Women's College
EDWARD WEDDELL PANGBURN,	<i>Elizabeth.</i>	Walker Street
CLARENCE WILLIAM PETERS,	<i>Ligonier.</i>	No. 2, East College
RUDOLPH PETERSON,	<i>Lewisburg.</i>	Lewisburg
ELLIS LAWRENCE RAESLEY,	<i>Wilkes-Barre.</i>	No. 119, East College
JOHN BENJAMIN RISHEL,	<i>Hughesville.</i>	No. 52, West College
CLOYD PEOPLES ROBB,	<i>New Florence.</i>	No. 11, East College
EDGAR LLOYD ROGERS,	<i>Nittany.</i>	No. 12, East Wing
DWITE HAYDEN SCHAFFNER,	<i>Falls Creek.</i>	No. 4, East College
WILLIAM HILLIARD SCHUYLER,	<i>Milton.</i>	Milton
CHARLES EDGAR SELLERS,	<i>Emmitsburg, Md.</i>	South Third Street
RUSSELL CONWELL SHIPMAN,	<i>Sunbury.</i>	Lewisburg
OMAR HARRISON SMITH,	<i>Blairsville.</i>	No. 98, East College
JOHN HENRY SPEER, JR.,	<i>West Chester.</i>	No. 61, West College
GEORGE SALVADORE STEVENSON,	<i>Vineland, N. J.</i>	No. 16, East Wing
MIRIAM JUSTINIA STRICKLER,	<i>Lewisburg.</i>	Lewisburg
MYRNA RUTH STRICKLER,	<i>Lewisburg.</i>	Lewisburg
EARL SCHNEIDER TEED,	<i>Lloyd.</i>	No. 16, West Wing

NAME.	RESIDENCE.	ROOM.
ELNORA LOUISE TRESCOTT,	<i>Berwick.</i>	Women's College
MARK MCNINCH WALTER,	<i>Mt. Carmel.</i>	Lewisburg
WALLACE JAMES WARD,	<i>Union City.</i>	No. 32, West College
WINIFRED WERKHEISER,	<i>West Milton.</i>	West Milton
FRANK FORREST WHITTAM,	<i>Chester.</i>	South Third Street
THOMAS BENNETT WILLIAMS,	<i>Saint Clair.</i>	Walker Street
WILLIAM THOMAS WINDSOR,	<i>Bradford.</i>	No. 41, West College
JOHN MOORE WINGERT,	<i>Lewisburg.</i>	No. 44, East College
HIRAM MICHAEL WOLFE,	<i>Lewisburg.</i>	Lewisburg

Seniors, 91.

THE JUNIOR CLASS.

CLASS OF 1916.

NAME.	RESIDENCE.	ROOM.
SAMUEL GUY ALTER,	<i>Parnassus.</i>	No. 100, East College
ESKEL VALENTINE ANDERSON,	<i>Monessen.</i>	Lewisburg
LESTER JUDSON BARTLETT,	<i>Lewisburg.</i>	Lewisburg
RAY PAUL BIGLER,	<i>Bentleyville.</i>	No. 89, East College
WADE FRANCIS BLACKBURN,	<i>Stahlstown.</i>	No. 3, East College
WARREN FOSTER BROOKS,	<i>York.</i>	No. 74, East College
SAMUEL MILTON BRYANT,	<i>Lewistown.</i>	No. 8, West Wing
DOROTHY ELIZABETH BUNNELL,	<i>Union, N. J.</i>	Women's College
BRUCE EDWARD BUTT,	<i>New Midway, Md.</i>	No. 79, East College
EDGAR CARLTON CAMPBELL,	<i>Shunk.</i>	Walker Street
LESLIE HARLAND CAMPBELL,	<i>Shunk.</i>	Walker Street
RUSSELL SAVIDGE CONRAD,	<i>Sunbury.</i>	Lewisburg
JOHN JOSEPH CONWAY,	<i>Amsterdam, N. Y.</i>	No. 42, West College
MAURICE BACON COOK,	<i>Greenwich, N. J.</i>	No. 65, West College
SAMUEL MARSHALL DAVENPORT,	<i>Plymouth.</i>	No. 8, West College
ROSCOE GRANGER DAVIS,	<i>West Chester.</i>	No. 63, West College
JOHN JONATHAN DE HAVEN,	<i>Duncannon.</i>	Lewisburg
RUTH EMLYN EMBREY,	<i>Mahanoy City.</i>	South Fourth Street
MARGARET WASHINGTON EVANS,	<i>Plymouth.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
RUSSELL WILLIAM EVERETT,	<i>Slatington.</i>	No. 104, East College
JAMES BURK FOLEY,	<i>Renovo.</i>	No. 38, West College
CYRUS BROWN FOLLMER,	<i>Milton.</i>	No. 30, West College
CARRIE DUNBAR FORESMAN,	<i>Lewisburg.</i>	South Seventh Street
MARY ELLA FREED,	<i>Williamsport.</i>	Women's College
RALPH WENDELL FRYE,	<i>Monessen.</i>	Walker Street
HAROLD WENDELL GIFFIN,	<i>Newton, N. J.</i>	No. 5, West College
CLARENCE EDWARD GLASS,	<i>Reading.</i>	No. 25, East Wing
WILLIAM THOMAS GOODWIN,	<i>Coatesville.</i>	Walker Street
HELEN MARGARET GROFF,	<i>Washington, N. J.</i>	Women's College
EDWIN CHARLES HAGEMAN,	<i>Newark, N. J.</i>	No. 88, West College
HILDRED HOWARD HANN,	<i>Norwich, N. Y.</i>	No. 5, East Wing
MARIE ELIZABETH HARER,	<i>Blossburg.</i>	Women's College
LEWIS STOUT HEINEN,	<i>Milton.</i>	Milton
HAROLD BURROWS HENDERSON,	<i>Montgomery.</i>	South Third Street
SARA IRENE HILBISH,	<i>Northumberland.</i>	Northumberland
HELEN IRENE HORTON,	<i>West Brownsville.</i>	South Front Street
THOMAS LEWIS JAMES,	<i>Sharon.</i>	No. 52, East College
JOHN FREDERICK JEFFERY,	<i>Wesleyville.</i>	No. 22, East Wing
HELEN JENKINS,	<i>Franklin.</i>	Women's College
MARY LANGLEY JONES,	<i>West Pittston.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
CECELIA KITLOWSKI,	<i>Nanticoke.</i>	Women's College
MARY BELLE LEES,	<i>Juniata.</i>	Women's College
BURTON FREDERICK LEWIS,	<i>Wilkes-Barre.</i>	No. 82, West College
CYRIL ELTON LEWIS,	<i>Plymouth.</i>	No. 16, West Wing
HELEN DERR LEWIS,	<i>Watsonstown.</i>	Watsonstown
PAUL BRENTON LEWIS,	<i>Lewisburg.</i>	Lewisburg
JOSEPH EARL MALIN,	<i>Frazer.</i>	No. 13, East Wing
RUTH SPRAGUE MATTERN,	<i>Huntingdon.</i>	Women's College
STERLING RAYMOND MENSCH,	<i>Wilkes-Barre.</i>	No. 102, East College
GEORGE FUNSTON MILLER,	<i>Lewisburg.</i>	South Second Street
THERESA CATHERINE MCCOLLUM,	<i>Montrose.</i>	Lewisburg
MARGARET MORTON MCFARLAND,	<i>Northumberland.</i>	Northumberland
OLIVER HAYES MCFARLAND,	<i>Watsonstown.</i>	No. 93, West College
ELIZABETH LUCILE MCGEE,	<i>Parkersburg, W. Va.</i>	Women's College
JAMES EDWARD NANCARROW,	<i>Jersey Shore.</i>	No. 50, West College
GEORGE H. NEFF, JR.,	<i>Sunbury.</i>	Lewisburg
VERNIE GRACE NOLL,	<i>Lewisburg.</i>	Lewisburg
HIRAM PERCIVAL NORMAN,	<i>Sunbury.</i>	No. 57, West College
MILTON JARRETT NORMAN,	<i>Sunbury.</i>	No. 56, West College
ERIC ADAM OESTERLE,	<i>Woodstown, N. J.</i>	St. George Street
ELSIE MARTHA PARK,	<i>Montandon.</i>	Montandon

NAME.	RESIDENCE.	ROOM.
OLIVE MILLICENT PARK,	<i>Montandon.</i>	Montandon
WILLIAM LOUIS PARK,	<i>Montandon.</i>	Montandon
AMY LLEWELLYN PATTERSON,	<i>Eatontown, N. J.</i>	South Sixth Street
DAYTON LEO RANCK,	<i>New Columbia.</i>	No. 12, West College
GRANT KIMBER RAWSON,	<i>Atlantic City, N. J.</i>	Walker Street
NORMAN JACOB REHMAN,	<i>Newark, N. J.</i>	No. 91, West College
ANNA LOIS REYNOLDS,	<i>Clintondale, N. Y.</i>	Women's College
WILLIAM WALLACE RIDGE,	<i>Lewisburg.</i>	Lewisburg
ARCHIBALD MCCORMICK RIPPEL,	<i>Milton.</i>	Walker Street
KENNETH COLQUHOUN RITCHIE,	<i>Rahway, N. J.</i>	No. 9, East Wing
MARY FLORENCE ROLLINS,	<i>Altoona.</i>	Women's College
CLYDE EDWARD RUNK,	<i>Harrisburg.</i>	South Third Street
JEROME CRANMER SALSURY,	<i>Monroeton.</i>	No. 27, East Wing
HOMER MORRISON SANDERS,	<i>Vicksburg.</i>	No. 9, West Wing
WILLIAM LEE SHOWERS,	<i>West Milton.</i>	West Milton
HAROLD EMERSON SMITH,	<i>Edgewood Park.</i>	Walker Street
JAMES RUSSELL SNYDER,	<i>Bentleyville.</i>	No. 85, East College
BAKER FAIRCHILD SPYKER,	<i>Lewisburg.</i>	Market Street
DEAN DONNELL STURGIS,	<i>Uniontown.</i>	South Third Street
GRACE ISABEL SUTTON,	<i>West Newton.</i>	Women's College
LESTER ALBERT SWITZER,	<i>Hawley.</i>	No. 88, East College

NAME.	RESIDENCE.	ROOM.
RICHARD JONES WAGENSELLER TEMPLIN,	<i>Sunbury.</i>	Sunbury
CHARLES EUGENE TILTON,	<i>South Amboy, N. J.</i>	No. 80, East College
LOUIS NICOLI TRIPICIAN,	<i>Atlantic City, N. J.</i>	South Third Street
FRANK GEORGE URBANOWICZ,	<i>Mt. Carmel.</i>	No. 64, East College
PAUL W. VAN DEN BURGH,	<i>Stockport, N. Y.</i>	No. 79, West College
SHAILER WARREN VENTRES,	<i>Port Allegany.</i>	No. 11, East Wing
EMMA ESTHER WEDDLE,	<i>West Newton.</i>	Women's College
RUTH WILLIAMS,	<i>Parsons.</i>	Women's College
HENRY CHARLES WOLFE,	<i>Lewisburg.</i>	St. George Street
VIRGINIA BLANCHE WOOD,	<i>Washington.</i>	Women's College
CHARLES RHOADES WRIGHT,	<i>Trenton, N. J.</i>	No. 91, West College
RUBY JANE YOUNG,	<i>Dewart.</i>	Women's College

Juniors, 94.

THE SOPHOMORE CLASS.

CLASS OF 1917.

NAME.	RESIDENCE.	ROOM.
MEREDITH LUFFBARY ABBOTT,	<i>Glassboro, N. J.</i>	No. 6, West College
MILES DOMER ACKERMAN,	<i>Turbotsville.</i>	No. 37, East College
EDWIN EWART AUBREY,	<i>Kingston.</i>	No. 2, East Wing
RUTH BALLENTINE,	<i>Clarion.</i>	Women's College
GEORGE BARNHART,	<i>Sunbury.</i>	No. 34, West College
RUTH PAULINE BARTHOLD,	<i>Bethlehem.</i>	Women's College
LOUISE ANTOINETTE BASSELL,	<i>Philippi, W. Va.</i>	Women's College
HAROLD AMOS BEERS,	<i>Watertown, Conn.</i>	Walker Street
GEORGE THOMAS BENDER,	<i>Lewisburg.</i>	Lewisburg
FRED ELKANAH BENEDICT,	<i>Canton.</i>	No. 24, East College
ARNOLD LEIGH BENTON,	<i>Bradford.</i>	No. 29, East College
EUGENE PETER BERTIN,	<i>Williamsport.</i>	No. 95, West College
PAUL WHEELER BOGGESS,	<i>Philippi, W. Va.</i>	No. 5, East Wing
RUSSELL WASHINGTON BOWERSOX,	<i>Sunbury.</i>	Lewisburg
PETER PAUL BRANTLEY,	<i>Schenectady, N. Y.</i>	No. 16½, East Wing
FRED CHARLES BRENNER,	<i>Hollidaysburg.</i>	South Third Street
HELEN CHRISTINA BROWN,	<i>Morristown, N. J.</i>	Women's College
FOUNTAIN BURLEW,	<i>Freneau, N. J.</i>	Walker Street
CHARLES BUTCHINSKI,	<i>Nanticoke.</i>	No. 10, West Wing

NAME.	RESIDENCE.	ROOM.
LEROY PIERRE CALKIN,	<i>Atlantic City, N. J.</i>	South Third Street
JAMES ARLING CASE,	<i>Boonton, N. J.</i>	No. 60, East College
GEORGE BECHT CHAMPION,	<i>Montoursville.</i>	No. 71, West College
KATHERINE CLAYTON,	<i>Lewisburg.</i>	Lewisburg
MARGARET MURRAY COLLINS,	<i>Lewisburg.</i>	Lewisburg
PAUL HACKETT COLLINS,	<i>Salem, N. J.</i>	Walker Street
JEANNETTE COOKE,	<i>Haddonfield, N. J.</i>	Women's College
VERA QUINDARE COUCH,	<i>Watsonstown.</i>	Watsonstown
WILLIAM HARVEY CRAIGHEAD,	<i>Elizabeth.</i>	Walker Street
MAURICE HOWARD CRYDER,	<i>Tyrone.</i>	No. 3, East Wing
EARL NEAGLEY DEPPEN,	<i>Sunbury.</i>	No. 55, West College
RALPH BECKER DERR,	<i>Milton.</i>	Milton
JOSEPH JAMES DIRZULAITIS,	<i>Mt. Carmel.</i>	No. 29, East Wing
ROBERT DONALDSON,	<i>DuBois.</i>	No. 30, West Wing
ANNA EMELINE DOWNING,	<i>West Nanticoke.</i>	Water Street
DONALD ROSS DUNKLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ARTHUR EYSTER,	<i>Fisher's Ferry.</i>	No. 6, East Wing
CARL DALIUS FELTON,	<i>Sunbury.</i>	Sunbury
RALEIGH MILTON FELTON,	<i>Connellsville.</i>	Walker Street
CHARLES HENRY WASHINGTON FISHER,	<i>Ashland.</i>	Lewisburg
HOWARD CHRISTOPHER FISHER,	<i>Shamokin Dam.</i>	No. 24, West Wing

NAME.	RESIDENCE.	ROOM.
JOSEPH ROSSER FISHER,	<i>New Brighton.</i>	No. 13, West Wing
EDITH VIRGINIA FOCHT,	<i>Lewisburg.</i>	Lewisburg
DONALD ANTHONY FUSIA,	<i>Wilkinsburg.</i>	South Third Street
BRUCE DALLAS GALBRAITH,	<i>Bridgeton, N. J.</i>	No. 8, West Wing
WARNER MILLER GALLOWAY,	<i>Lewisburg.</i>	Lewisburg
WILLIAM JOHN GEATING,	<i>Ashland.</i>	No. 32, East College
CHARLES CLIFFORD GILLETTE,	<i>Rushville, N. Y.</i>	No. 80, West College
EARL LEROY GRACE,	<i>Penn Yan, N. Y.</i>	No. 23½, West Wing
JOHN AUGUSTUS GRAY, JR.,	<i>Milton.</i>	Milton
ARTHUR JOHNSON GREENLEAF,	<i>Fulton House.</i>	No. 65, West College
DONALD ALBERT HAMAN,	<i>Eagles Mere.</i>	St. George Street
ANNA ELLIS HANKINS,	<i>Havre de Grace, Md.</i>	Women's College
LILLIAN HELENA HANNOLD,	<i>Paulsboro, N. J.</i>	Women's College
FRANCES GERALDINE HANSON,	<i>Flemington, N. J.</i>	Women's College
CLARENCE OLIVER HARTMAN,	<i>Port Clinton.</i>	No. 61, East College
FRANK SLAYSMAN HARTMAN,	<i>Elysburg.</i>	No. 8, East College
SARAH ALICE HASLAM,	<i>Philadelphia.</i>	Women's College
ALBERT WAYNE HATFIELD,	<i>Newark, N. J.</i>	No. 81, West College
CHARLES JOSEPH HAY,	<i>Pottsville.</i>	No. 108, East College
DONALD DAVID HAYES,	<i>Hartleton.</i>	South Third Street
JOHN ATHERTON HEBERLING,	<i>Stickshinney.</i>	St. George Street

NAME.	RESIDENCE.	ROOM.
HARRIET EDNA HILTY,	<i>Vandergrift.</i>	Women's College
HAROLD SAMUEL HOPLER,	<i>Williamsport.</i>	St. George Street
EDITH MCCLONG HORTON,	<i>Millville, N. J.</i>	Women's College
MARY ELIZABETH HUMPHREYS,	<i>Nanticoke.</i>	Women's College
JAMES PREDMORE HURLBERT,	<i>Montandon.</i>	Montandon
HENRY SNYDER ILLINGWORTH,	<i>Tyrone.</i>	No. 42, East College
ELLA CORINNE JONES,	<i>Montrose.</i>	Women's College
EDWARD GRANT KASE,	<i>South Williamsport.</i>	No. 108, East College
BENJAMIN FRANKLIN KENDIG,	<i>Salunga.</i>	No. 51, West College
CHARLES CLEMENTS KEPPLER,	<i>New Alexandria.</i>	No. 23, East Wing
HOLMAN GEORGE KNOUSE,	<i>Sunbury.</i>	No. 19, West Wing
DONALD WILLIAM KORTH,	<i>New York, N. Y.</i>	No. 32, West Wing
CLARENCE MACLAY KRINER,	<i>Waynesboro.</i>	No. 73, West College
HELEN ELIZABETH KROUSE,	<i>Altoona.</i>	Women's College
OTTO UNKREY LAWRENCE,	<i>Emlenton.</i>	St. George Street
ELIZABETH BOYD LEHR,	<i>Haddonfield, N. J.</i>	Women's College
HOWARD CHESTER LIEBENSBERGER,	<i>Williamsport.</i>	St. George Street
WALTER TOMLIN LODGE,	<i>Paulsboro, N. J.</i>	No. 73, East College
WILLIAM ARTHUR LOFFT,	<i>Collingswood, N. J.</i>	No. 79, West College
JOHN FRANKLIN LONG,	<i>Flemington.</i>	No. 83, West College
ROYDEN STROVEL MATLACK,	<i>Haddon Heights, N. J.</i>	No. 8, West College

NAME.	RESIDENCE.	ROOM.
CHARLES DAVID MAURER,	<i>Shamokin.</i>	No. 57, East College
JAMES ROBERT McCORMICK,	<i>Tyrone.</i>	No. 81, West College
EDWIN ROLAND McNUTT,	<i>Vandergrift.</i>	Lewisburg
LORA ELLEN McQUAY,	<i>Emporium.</i>	Women's College
DELETH EBER MELLINGER,	<i>Ephrata.</i>	Lewisburg
DONALD RAYMOND MILLER,	<i>Mifflinburg.</i>	Mifflinburg
DAVID LANDERS MINK,	<i>Sharon.</i>	No. 56, East College
OLIVE EWING MOORE,	<i>Bridgeton, N. J.</i>	Women's College
ST. CLAIR MURRAY,	<i>Binghamton, N. Y.</i>	No. 32, West Wing
WALTER CHRISTOPHER MYERS,	<i>Jersey Shore.</i>	No. 30, East College
REGINALD SPOFFORD NEWBURY,	<i>Point Pleasant, N. J.</i>	Lewisburg
JESSE WARREN NOLL,	<i>Lewisburg.</i>	Lewisburg
EDNA ADETA OVERFIELD,	<i>West Pittston.</i>	Women's College
JEANNETTE CAROLYN OWENS,	<i>Lewisburg.</i>	Lewisburg
GEORGE GRATHAM PAINTER,	<i>Muncy.</i>	St. George Street
SARA ASENATH PARK,	<i>Ben Avon.</i>	Women's College
EARL STEWARD PEDIGO,	<i>Corry.</i>	South Third Street
ELMER SMITH PETTIT,	<i>Woodstown, N. J.</i>	St. George Street
GEORGE WILBUR POTTER,	<i>Bloomsburg.</i>	No. 69, East College
GROVER CLEVELAND POUST,	<i>Muncy.</i>	No. 14, East Wing
KATHRYN ELIZABETH REDELIN,	<i>Freeland.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
MARY ELIZABETH REESE,	<i>Lansford.</i>	Women's College
HERMAN FREDERICK REICH,	<i>Sunbury.</i>	No. 11, East Wing
ALEXANDER MCPHERSON RUSSELL,	<i>Bedford.</i>	South Third Street
PAUL E. SANDEL,	<i>Lewisburg.</i>	Lewisburg
SAMUEL LEROY SEEMAN,	<i>Oakmont.</i>	No. 29, West College
JOHN IRWIN SHAFFER,	<i>West Chester.</i>	No. 62, West College
HELEN LORRAINE SHAFFER,	<i>Lewisburg.</i>	Lewisburg
RUSSELL M. SHEARER,	<i>Northumberland.</i>	Northumberland
DON BENITO SHIPMAN,	<i>Sunbury, R. D. 4.</i>	No. 31, East College
HARLEY NEVIN SHIPMAN,	<i>Sunbury.</i>	Sunbury
FRANCES H. SILBERSTEIN,	<i>Philadelphia.</i>	Women's College
CHARLES BUNNELL SIPLEY,	<i>Nicholson.</i>	No. 90, West College
CALVIN JAMES SMITH,	<i>Bellefonte.</i>	Walker Street
CHARLES AUSTIN SOARS,	<i>Philadelphia.</i>	No. 79, West College
IRWIN POTTER SOWERS,	<i>Pottersville, N. J.</i>	No. 19, East Wing
CLARA RAY SPEARE,	<i>Lewisburg.</i>	Lewisburg
RAYMOND EYLER SPRENKLE,	<i>Waynesboro.</i>	No. 21, East Wing
CLINTON IRWIN SPROUT,	<i>Picture Rocks.</i>	No. 92, East College
WARNER SPURGEON SQUIBB,	<i>McKeesport.</i>	Walker Street
FRANK EDWARD STETLER,	<i>Lewisburg.</i>	Lewisburg
ALEXANDER STORER,	<i>Pitman, N. J.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
EDITH PAULINE SUPERKO,	<i>Nanticoke.</i>	Women's College
EEB NELSON SWOPE,	<i>Waynesboro.</i>	No. 21, East Wing
RICHARD EVELEIGH THOMAS,	<i>Nanticoke.</i>	No. 20, West College
ERLE MELVIN TOPHAM,	<i>Philadelphia.</i>	South Third Street
ETHEL VIOLA WARD,	<i>Lewisburg.</i>	Lewisburg
CLARENCE REUBEN WEBER,	<i>Rebersburg.</i>	No. 23, East College
EARLE BAXTER WEST,	<i>Apollo.</i>	Lewisburg
YEURITH LEVINIA WESTBAY,	<i>Elizabeth.</i>	Women's College
AMANDA LAURA WHITAKER,	<i>Millville, N. J.</i>	Women's College
FRANK E. WILLIAMS,	<i>Nanticoke.</i>	No. 10, West Wing
ISABELLE BOWMAN WOLFE,	<i>Lewisburg.</i>	Lewisburg
ARTHUR ROLLAND YON,	<i>Atlantic City, N. J.</i>	South Third Street

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THE FRESHMAN CLASS.

CLASS OF 1918.

NAME.	RESIDENCE.	ROOM.
ALVIN JACOB ADAMS,	<i>Bellaire, Ohio.</i>	No. 23, East Wing
JOHN ALLAN, JR.,	<i>Philadelphia.</i>	No. 28, East Wing
CHARLES JOSEPH ANCHOR,	<i>Philadelphia.</i>	No. 71, East College
WILLIAM PALMER BACHMAN,	<i>Sunbury.</i>	Sunbury
MARGUERITE BAIRD,	<i>Avonmore.</i>	Women's College
BRUCE LEROY BANKS,	<i>Atlantic City, N. J.</i>	No. 20, East College
ARTHUR PITCAIRN BARRINGER,	<i>Lewisburg.</i>	Lewisburg
WILLIAM VAN BARRINGER,	<i>Lewisburg.</i>	Lewisburg
HAROLD CASIMIR BARRON,	<i>Fairview.</i>	No. 74, West College
FRED BARNHART BAUMAN,	<i>Danville.</i>	No. 86, East College
ESTHER HANNA BAUMGARDNER,	<i>Sunbury.</i>	Women's College
MARY BARRICK BEATTY,	<i>Port Royal.</i>	Women's College
WALTER CLARENCE BEAVER,	<i>Oley, R. D. 3.</i>	No. 29, West Wing
FRANCIS JOSEPH BECKLEY,	<i>Nanticoke.</i>	No. 78, East College
JOHN EDGAR BENNETT,	<i>Port Monmouth, N. J.</i>	No. 11, West Wing
HIRAM JOHN BLOOM,	<i>Sunbury.</i>	No. 54, West College
MORTIMER JUDSON BONHAM,	<i>Bridgeton, N. J.</i>	No. 31, West Wing
CLAUDE OLIVER BOOTHROYD,	<i>Hartzdale, N. Y.</i>	No. 24, East Wing
RUSSELL ALBERT BOSTIAN,	<i>West Milton.</i>	West Milton

NAME.	RESIDENCE.	ROOM.
DAVID NATHANIEL BOSWELL,	<i>Lewisburg.</i>	Lewisburg
WALTER JACOB BOWER,	<i>Herndon.</i>	No. 27, East College
RUSSELL ELIAS BOYER,	<i>Sunbury.</i>	Sunbury
FRANCES LEIGHTON BROWN,	<i>Tunkhannock.</i>	Women's College
MARY MAGDALENE BUBB,	<i>Dalmatia.</i>	Women's College
ROBERT LEON BUCHER,	<i>Watsonstown.</i>	Watsonstown
RUTH MARIE CANNON,	<i>Nanticoke.</i>	Women's College
HARRY RENNER CASSLER,	<i>Lewisburg.</i>	Lewisburg
BERTHA CASTER,	<i>Lehighton.</i>	Women's College
ELIZABETH BIRD CHAMPION,	<i>Montoursville.</i>	Women's College
HAZARD CLINTON CHASE,	<i>Clearfield.</i>	No. 51, West College
MARGARET COATES,	<i>Plymouth.</i>	Women's College
ELMER RALPH CONNER,	<i>Ellwood City.</i>	No. 68, East College
RAYMOND WESTERVELT COOPER,	<i>Paterson, N. J.</i>	South Third Street
DAYMOND WALLACE COPELAND,	<i>Lindhurst, N. J.</i>	No. 90, West College
HARVEY DALE CRAWFORD,	<i>Brookville.</i>	No. 13, East College
CHARLES JUSTIN CURRAN,	<i>Philadelphia.</i>	No. 115, East College
FRANK DANOWSKI,	<i>Shenandoah.</i>	No. 27, West College
DARLE FAYE DAVIS,	<i>Allenwood.</i>	Allenwood
CHARLES WALTER DEAN,	<i>South Williamsport.</i>	No. 49, West College
CLIFFORD COATES DECK,	<i>Trenton, N. J.</i>	No. 15, West Wing

NAME.	RESIDENCE.	ROOM.
ALFRED RAPHEL DELAND,	<i>Watertown, Conn.</i>	No. 83, East College
HARVEY CARL DETWILER,	<i>Norristown.</i>	No. 28, East College
ARTHUR GILROY DEWALD,	<i>Jerseytown.</i>	No. 15, East Wing
MARY DEWEES,	<i>Montrose.</i>	Women's College
HELENE FORSYTH DIFFENDAFER,	<i>Nanticoke.</i>	Women's College
BESSIE WHARTON DILAHAY,	<i>Salem, N. J.</i>	Women's College
ADRIAN JAMES DOLPHIN,	<i>Harrison, N. J.</i>	No. 11, West College
MARGARET DOLPHIN,	<i>Kane.</i>	Women's College
THOMAS WISE JEROME DONOHUE,	<i>Greensburg.</i>	No. 18, East College
ROBERT SAXTON DOWNING,	<i>Milford, N. Y.</i>	No. 52, East College
MARION MARMADUKE EARLE,	<i>Lewisburg.</i>	Lewisburg
LEWIS ABRAM EATON,	<i>Harrisburg.</i>	No. 12, West Wing
KATHRYN BURDINE EILENBERGER,	<i>Stroudsburg.</i>	Women's College
ALBERT WINSLOW ELLIOTT,	<i>Fayette City.</i>	No. 67, West College
REYNOLDS FRAMPTON ELLIOTT,	<i>Clarion.</i>	No. 15, West College
THOMAS AUSTIN ESHELMAN,	<i>Franklin.</i>	No. 99, East College
MARGARET HILL EVANS,	<i>Nanticoke.</i>	Women's College
ETHEL RUTH FARLEY,	<i>Mifflinburg.</i>	Mifflinburg
MERRILL FRANKLIN FEAIRHELLER,	<i>Spring City.</i>	No. 21, West Wing
HENRY LAWRENCE FONDA,	<i>Milton.</i>	Milton
ARTHUR MEYRICK FORESMAN,	<i>South Williamsport.</i>	No. 112, East College

NAME.	RESIDENCE.	ROOM.
GROVER CLEVELAND FORESMAN,	<i>New Columbia.</i>	New Columbia
MABEL HAIN FRITZ,	<i>West Reading.</i>	Women's College
IRENE MARIE FRYE,	<i>Monessen.</i>	Women's College
EDITH GABEL,	<i>Richlandtown.</i>	Women's College
RALPH WILSON GARDNER,	<i>Alexandria.</i>	No. 18, West Wing
LLOYD LOY GARNER,	<i>Harrisburg.</i>	No. 30, East Wing
HAZEL MARIE GAY,	<i>Homer, N. Y.</i>	Women's College
WILLIAM ALLISON GEARY,	<i>Lock Haven.</i>	No. 101, East College
HAROLD DICKINSON GERMER,	<i>Harrisburg.</i>	No. 12, West Wing
JOHN STEINER GOLD,	<i>Turbotville.</i>	North Fourth Street
JOHN CORNELIUS GRAMLEY,	<i>Monongahela.</i>	No. 69, West College
HERBERT CARL GRICE,	<i>Scranton.</i>	No. 17, West College
HELEN HADDEN,	<i>Doylestown.</i>	Women's College
ELIZABETH LOUISE HAHN,	<i>Meshoppen.</i>	Women's College
LEILA GWENDOLEN HANNA,	<i>Warren.</i>	Women's College
MADONNA HARRIS,	<i>Laceyville.</i>	Women's College
STANLEY NEWTON HARRIS,	<i>Lewisburg.</i>	Loomis Street
EMERSON ROY HASSRICK,	<i>Muncy.</i>	No. 47, West College
ZELDA JANE HAWES,	<i>Cherry Tree.</i>	Women's College
FRANK CALDWELL HAYES,	<i>Erie.</i>	No. 75, West College
WILLIAM ROY HECKENDORN,	<i>Duncannon.</i>	No. 25, East Wing

NAME.	RESIDENCE.	ROOM.
EMERSON MONROE HECKERT,	<i>Fisher's Ferry.</i>	Lewisburg
FRANCIS LUTHER COULSON HEIKES,	<i>Dillsburg.</i>	No. 20, West Wing
HENRIETTA HEINSLING,	<i>Altoona.</i>	Women's College
LESTER ADAM HERB,	<i>Snydertown.</i>	Snydertown
HELEN MAFFETT HERRITT,	<i>Jersey Shore.</i>	Women's College
ERNEST WELLINGTON HEWITT,	<i>Mifflinburg.</i>	Mifflinburg
ETHEL REBECCA HEWITT,	<i>Mifflinburg.</i>	Mifflinburg
WILLIAM REED HINDMAN,	<i>Clarion.</i>	No. 39, East College
EMIL WILLIAM HOLINGER,	<i>McKeesport.</i>	No. 22, West College
JENNINGS HOWARD HORNBERGER,	<i>Milton.</i>	Milton
JOSIAH LESTER HOUSER,	<i>Milroy.</i>	No. 16, West College
ALEM PRICE HULL,	<i>Montgomery.</i>	Montgomery
NORMAN KEEN HURLEY,	<i>Salem, N. J.</i>	No. 15½, West Wing
CHARLES VERNON IREDELL,	<i>Painted Post, N. Y.</i>	No. 11, West Wing
NERISSA DAGMAR JAMES,	<i>New York, N. Y.</i>	Women's College
MELVIN JOHNSON,	<i>Highlands, N. J.</i>	No. 45, West College
MILLER ALANSON JOHNSON,	<i>Lewisburg.</i>	South Third Street
WILLIAM THOMAS JOHNSON,	<i>Sunbury.</i>	Sunbury
EVERETT THOMAS JONES,	<i>Scranton.</i>	No. 90, West College
JOHN MCKEE JONES,	<i>Aliquippa.</i>	No. 53, East College
CHESTER SCOTT KEEFER,	<i>Altoona.</i>	No. 86, West College

NAME.	RESIDENCE.	ROOM.
MARION VANETTA KIESS,	<i>Williamsport.</i>	Women's College
CHARLES ANDREW KISSELL,	<i>Lock Haven.</i>	South Third Street
EDWARD ANDREW KITLOWSKI,	<i>Nanticoke.</i>	No. 77, East College
JOHN JOSEPH KOSKER,	<i>Nanticoke.</i>	No. 19, West College
LAWRENCE JACOB KRAUS,	<i>Elwood City.</i>	No. 67, East College
ARIAL KROMER,	<i>Milton.</i>	Milton
ELIZABETH BELINDA LAIRD,	<i>Tyrone.</i>	Women's College
AILEEN MARIE LARSON,	<i>Kane.</i>	Women's College
FRANK AMES LAWRENCE,	<i>Steelton.</i>	No. 43, East College
WALTER LARRISON LEES,	<i>Leechburg.</i>	No. 26, East Wing
SAMUEL DAVID LENOX,	<i>Trenton, N. J.</i>	No. 14, West Wing
JOSEPH STANFORD LEPLEY,	<i>Winfield.</i>	Winfield
KATHERINE MARINE LERMANN,	<i>Monessen.</i>	Women's College
DAGMAR ELLEN LETH,	<i>Trenton, N. J.</i>	Women's College
EMMA KATHERINE LEVEGOOD,	<i>Jersey Shore.</i>	Women's College
LESTER EUGENE LIGHTON,	<i>Williamsport.</i>	No. 2, West Wing
GEORGE POST LITTLE,	<i>Montrose.</i>	No. 43, West College
CLARENCE RUSSELL LOCKARD,	<i>Muncy.</i>	No. 95, East College
BARTON HEARST MACKEY,	<i>Oxford.</i>	No. 117, East College
HENRY THOMAS MARSHALL,	<i>South Brownsville.</i>	No. 44, West College
EMORY FREDERICK MARSIGLIO,	<i>Torrington, Conn.</i>	No. 53, West College

NAME.	RESIDENCE.	ROOM.
CARLISLE WEAVER MASON,	<i>South Williamsport.</i>	No. 2, West Wing
WILLIAM WALLACE MASTERTON,	<i>Paterson, N. J.</i>	No. 84, East College
MARGARET GEISSENHAINER MATTERN,	<i>Reading.</i>	Women's College
MARGUERITE FRANCES MAY,	<i>Johnsonburg.</i>	Women's College
HENRIETTA FRANCES MCCARTY,	<i>Allenwood.</i>	Allenwood
DOROTHY INEZ MCCLINTIC,	<i>New York, N. Y.</i>	Women's College
FRANCIS PATRICK McDERMOTT,	<i>Houtzdale.</i>	No. 46, West College
GERTRUDE MARY MCGOEY,	<i>Coudersport.</i>	Women's College
MARJORIE FERRIS McNALL,	<i>Muncy.</i>	Women's College
DOROTHEA FRANCES MEEK,	<i>Allenwood.</i>	Allenwood
FLORINE MICHAEL,	<i>Laceyville.</i>	Women's College
FELIX VALOIS MIKOLAJCZAK,	<i>Nanticoke.</i>	No. 21, West College
GEORGE HOBART MILES,	<i>Portage.</i>	No. 18, West Wing
JAMES LAFAYETTE MILLER,	<i>Cape May, N. J.</i>	No. 94, East College
MABEL DELIA MINCH,	<i>Bridgeton, N. J.</i>	Women's College
MIRIAM AVIS MINCH,	<i>Tyler Hill.</i>	Women's College
ROBERT STORK MOORE,	<i>Bluff Point, N. Y.</i>	No. 22, West Wing
FRANKLIN MORRETT,	<i>Steelton.</i>	No. 44, East College
PAUL CUSTER MOSER,	<i>Connellsville.</i>	No. 5, East College
CLYDE FRANKLIN MOWRER,	<i>Watsontown.</i>	Watsontown
MALCOLM EUGENE MUSSER,	<i>Lewisburg.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
ROBERT MITCHELL NEAL,	<i>Rio Grande, N. J.</i>	No. 16, East Wing
BOYD LAWRENCE NEWCOMB,	<i>Newport, N. J.</i>	No. 32½, East Wing
LEON HENRY NOLL,	<i>Lewisburg, R. D. 2.</i>	Lewisburg
HENRY SHERMAN NORTHRUP,	<i>Monroeton.</i>	No. 28, East Wing
ELLIS HEATH PARSONS,	<i>Spring City.</i>	No. 21, West Wing
ARTHUR ENOCH PAULHAMUS,	<i>Cogan Station.</i>	No. 15, East Wing
SIDNEY JAMES PEALE,	<i>Eagles Mere.</i>	No. 97, East College
MARGARET BAINBRIDGE PHILLIPS,	<i>Wilkes-Barre.</i>	North Second Street
JESSIE IRENE POTTS,	<i>Greensburg.</i>	Women's College
STEPHEN FRALEY PUFF,	<i>Philadelphia.</i>	No. 110 East College
EVELYN EDWINA PUGH,	<i>Oxford.</i>	Women's College
BRUCE OLIVER RANCK,	<i>New Columbia.</i>	New Columbia
EARL PERCY RAUB,	<i>Penn Yan, N. Y.</i>	No. 22, West Wing
JOSEPHINE FLORELLE READING,	<i>Franklin.</i>	Women's College
CAMILLA BUNKER REED,	<i>Hollidaysburg.</i>	Women's College
CHARLES AFFLERBACH REED,	<i>Philadelphia.</i>	No. 19, East Wing
ELWOOD STERLING REX,	<i>Emerald.</i>	No. 103, East College
MURIEL BELLE RIDER,	<i>Millville.</i>	West Milton
MARION RIESS,	<i>Mercedes, Texas.</i>	Women's College
FRANK HENRY RITTER,	<i>Paterson, N. J.</i>	No. 48, West College
JAMES EDWARD ROBBINS,	<i>Lewisburg.</i>	South Third Street

NAME.	RESIDENCE.	ROOM.
FORREST GLEN ROGERS,	<i>Nittany.</i>	No. 12, East Wing
HUGH THOMPSON RUSSELL,	<i>Mt. Pleasant.</i>	No. 12, East College
MARGUERITE MARY RYAN,	<i>Woodbury, N. J.</i>	Women's College
FAY MARGUERITE SCHOCH,	<i>Huntingdon.</i>	Women's College
JAMES PHILIP SCOTT,	<i>Monongahela.</i>	No. 68, West College
MIRIAM STEWART SEATON,	<i>Merchantville, N. J.</i>	Women's College
JULIUS FREDERICK SEEBACH,	<i>Hollidaysburg.</i>	No. 10, East Wing
FLORENCE PAULINE SHALTER,	<i>Reading.</i>	Women's College
FRAZIER HERBERT SHEFFER,	<i>Milroy.</i>	No. 46, West College
ARTHUR R. SHEPPARD,	<i>Bridgeton, N. J.</i>	No. 33, East College
DAVID CARLTON SHILLING,	<i>Sharon.</i>	No. 50, East College
WALTER STANLEY SHOFFSTALL,	<i>Kulpmont.</i>	No. 31, East Wing
GENEVIEVE SHUTTERLY,	<i>Monessen.</i>	Women's College
LOUIS WALTON SIPLEY,	<i>Nicholson.</i>	No. 90, West College
ORA BEATRICE SMITH,	<i>White Deer.</i>	White Deer
CHARLES FREDERICK GLADING SNYDER,	<i>Philadelphia.</i>	No. 116, East College
MARY SPEECE,	<i>Pittston.</i>	Women's College
SAMUEL DALE SPOTTS,	<i>Lewisburg.</i>	Market Street
GRACE ELLEN STARR,	<i>Homer, N. Y.</i>	Women's College
DANIEL RIDGWAY STEELE,	<i>Newton, N. J.</i>	No. 10, West College
LEROY G. STOLZ,	<i>Reading.</i>	No. 118, East College

NAME.	RESIDENCE.	ROOM.
EVERETT EVERSON STONE,	<i>Carbondale.</i>	No. 28, East Wing
REXFORD ERVIN STONE,	<i>Carbondale.</i>	No. 85, West College
RANDALL ERNEST STOVER,	<i>Mifflinburg.</i>	Mifflinburg
WILLIAM HERBERT SUMMERS,	<i>Moscow, R. D. 3.</i>	No. 55, East College
NATHAN TEITELBAUM,	<i>Northumberland.</i>	No. 14, West College
SARA EVANS THOMPSON,	<i>Sewell, N. J.</i>	Women's College
WILLIAM TORKINGTON,	<i>Wellsboro.</i>	No. 48, East College
WILLIAM EDMUNDSON TRIMBLE,	<i>McKeesport.</i>	No. 66, West College
ELIZABETH TURNER,	<i>Nanticoke.</i>	Women's College
ROBERT CHARLES UMLAUF,	<i>Muncy.</i>	No. 92, East College
MARIE VOLKMAR,	<i>Williamsport.</i>	Women's College
EVELYN HOPE VOSBURGH,	<i>Camden, N. J.</i>	Women's College
MARIAN VOSBURGH,	<i>Camden, N. J.</i>	Women's College
HARRY FORMAN WADE,	<i>Vineland, N. J.</i>	No. 20, East Wing
HIRAM JACOB WAGNER,	<i>Smithton.</i>	No. 23, West College
JAMES ROYALL WALDRON,	<i>Englewood, N. J.</i>	No. 35, East College
MARGARET BRIGHT WALLACE,	<i>Palmyra, N. J.</i>	Women's College
STUART MITCHELL WALTER,	<i>Mt. Carmel.</i>	No. 111, East College
MILTON WHEATON WARREN,	<i>Chincoteague, Va.</i>	No. 35, West College
ZERBA THERESA WEBER,	<i>Mechanicsburg.</i>	Women's College
MARTHA EVELYN WETTLAUER,	<i>Williamsport.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
CARMEN CAMILLA WHITEBREAD,	<i>Wilkesbarre.</i>	Women's College
FRED NIEWEG WILLIAMSON,	<i>Lincoln University.</i>	No. 24½, East Wing
HARRY GILBERT WILLSON,	<i>Williamsport.</i>	No. 14, East Wing
RAYMOND A. WITCHEY,	<i>Osceola Mills.</i>	No. 13, East Wing
NEWTON LUTHER YARNALL,	<i>Mt. Carmel.</i>	No. 7, East Wing
TRELLA ESTHER YODER,	<i>Belleville.</i>	Women's College
JOHN CLAYTON YON,	<i>Atlantic City, N. J.</i>	No. 19, East College
EDWARD JOHN ZEMAITIS,	<i>Shenandoah.</i>	No. 27, West College
	Freshmen, 216.	

NON-MATRICULATES.

NAME.	RESIDENCE.	ROOM.
JOHN MURPHY ARCHER,	<i>Bridgeton, N. J.</i>	No. 30, West Wing
*GEORGE CLARK BALDT,	<i>Chester.</i>	No. 17, East College
EVELYN COLLNER,	<i>Clarion.</i>	Women's College
MAURICE JOSEPH DAVIS,	<i>Greensburg.</i>	No. 25, East College
ROMAINE FRAMPTON,	<i>Clarion.</i>	Women's College
EVERETT WARREN FRANCIS,	<i>Taylor.</i>	No. 26, West College
*ETHEL MAY HIETER,	<i>Lewisburg.</i>	Lewisburg
THOMAS WILLIAM HUGHES,	<i>Mt. Carmel.</i>	No. 31, East Wing
ALICE SUSANNAH JOHNSON,	<i>Lewisburg.</i>	South Third Street
AILEEN AUDREY JOHNSTON,	<i>Avonmore.</i>	Women's College
CLARK WATSON KEENER,	<i>Indiana.</i>	No. 26, East College
FREDERICK EDDY KIEFFER,	<i>Mt. Carmel.</i>	No. 65, East College
ESTHER VIOLET LOWRY,	<i>Lock Haven.</i>	Women's College
GEORGE FRANKLIN RISSEL,	<i>Pottsgrove.</i>	No. 82, East College
*HOWARD LANDIS ROSENBERGER,	<i>Schwenksville.</i>	No. 109, East College
EDNA LENORE SAYENGA,	<i>Pittsburg.</i>	South Sixth Street
EARL CHARLES STOREY,	<i>South Brownsville.</i>	No. 45, West College

* Entered January 5, 1915.

NAME.	RESIDENCE.	ROOM.
ANNA ANGELINE WAITE,	<i>Lock Haven.</i>	Women's College
CARL ALBERT WALDNER,	<i>Ashland.</i>	No. 113, East College

Non-matriculいたes, 19.

SUMMARY.

Graduate Students	42
The Senior Class	91
The Junior Class	94
The Sophomore Class	136
The Freshman Class	216
Non-Matriculいたes	19
<hr/>	
Total in College of Liberal Arts.....	598

THE ACADEMY.

INSTRUCTORS.

WALTER SAMUEL WILCOX, SC.M.,
PRINCIPAL.

JOSEPH LINCOLN CHALLIS, A.M.,
LATIN AND HISTORY.

EDWARD JOHN RICHARDS, A.B.,
ENGLISH.

JOHN FRANCIS WINKLEBLECH, A.B.,
GREEK AND MATHEMATICS.

MARY GEORGIANA STANTON, PH.B.,
GERMAN.

MARGARET ELLEN KALP, A.B.,
LATIN.

JOHN WINTER RICE, B.S.,
SCIENCE.

ACADEMY STUDENTS.

FOURTH FORM.

NAME.	RESIDENCE.	ROOM.
JOHN CHARLES BRANDT,	<i>Altoona.</i>	No. 22, East Hall
WARREN WOODWARD BRYSON,	<i>Philadelphia.</i>	No. 10, East Hall
JOHN CATHERMAN,	<i>Hartleton.</i>	No. 21, East Hall
CHESTER ERNEST ESTLER,	<i>Boonton, N. J.</i>	No. 49, East College
WEBER LATCHA GERHART,	<i>Lewisburg.</i>	Home
VORIS B. HALL,	<i>Montgomery.</i>	Home
WHALAN WALLACE HERB,	<i>Snydertown.</i>	Home
EDWIN WEIMER HULL,	<i>Montgomery.</i>	Home
GEORGE MERRILL KUNKLE,	<i>Lewisburg, R. F. D.</i>	Home
STUART HAMLIN MAGLAUGHLIN,	<i>Altoona.</i>	No. 14, East Hall
NEWTON FRANKLIN NEWMAN,	<i>Lewisburg.</i>	Home
JAMES ALFRED PANGBURN,	<i>Elizabeth.</i>	No. 19, East Hall
GRAYSON KNOX ROGERS,	<i>Aspinwall.</i>	No. 15, East Hall
BERNHARDT RAMSOM SEEMANN,	<i>Oakmont.</i>	No. 13, East Hall
CLIFFORD ELLSWORTH WENTZ,	<i>Jersey Shore.</i>	No. 21, East Hall
CLYDE WITHINGTON,	<i>Snydertown.</i>	Home

THIRD FORM.

NAME.	RESIDENCE.	ROOM.
SAMUEL MCNAIR ANNAN,	<i>Emmitsburg, Md.</i>	No. 10, East Hall
DAVID CARL BARNHART,	<i>Pleasant Unity.</i>	No. 17, East Hall
MICHAEL DANOWSKI,	<i>Shenandoah.</i>	No. 9, East Hall
REBER L. GROOVER,	<i>Lewisburg.</i>	Home
WILLIAM EDWIN HOFFMAN,	<i>Tyrone.</i>	No. 20, East Hall
HARRY SCHENK PAUL, JR.,	<i>Oakmont.</i>	No. 13, East Hall
MANUEL DE JESUS SUROS,	<i>Manzanillo, Cuba.</i>	No. 23, East Hall

SECOND FORM.

HAROLD CLYDE McCULLOUGH,	<i>Washington.</i>	No. 11, East Hall
HAROLD MOORE,	<i>Sunbury.</i>	Home
JOHN M. PATTERSON,	<i>McKeesport.</i>	No. 19, East Hall
PETERS RODRIGUEZ O,	<i>Manzanillo, Cuba.</i>	No. 18, East Hall
CALVIN ELLSWORTH SWAYZE,	<i>Chester.</i>	No. 26, West Wing
JOHN M. WAGNER,	<i>Lewisburg.</i>	Home
JOHN P. WILLIAMS,	<i>Shenandoah.</i>	No. 8, East Hall

STUDENTS PURSUING SELECT STUDIES.

JOSEPH DAYKIN DENT,	<i>N. S. Pittsburg.</i>	No. 22, East Hall
HERBERT HARRIS EISLEY,	<i>Lewisburg.</i>	Home

NAME.	RESIDENCE.	ROOM.
WALTER D. McLAUGHLIN,	<i>Paterson, N. J.</i>	No. 24, West Wing
WILLIAM ANDREW REICHELDERFER,	<i>Milton.</i>	Home

SUMMARY.

The Fourth Form	16
The Third Form	7
The Second Form	7
Students Pursuing Select Studies.....	3
	—
Total in the Academy.....	33

Students enrolled in other departments of the University who receive instruction in the Academy classes:

German	2
Greek	13
Latin	18
History	3
Science	3
	—
	39
	—

Total receiving instruction in Academy classes..72

COURSES OF STUDY.

The Academy is designed to fit pupils for College, for Teaching, or for Business. It offers three Courses of Study.

I. The Classical Course extends through four years and is arranged to meet the requirements for admission to College. The Study of Latin begins with the First Form and continues for four years and two terms. The Study of Greek begins with the Third Form and continues for two years and one term. Notwithstanding the time given to these branches of study, fully one half of the entire Course is devoted to English, Historical, Mathematical, and Scientific subjects.

II. The Latin Scientific Course extends through four years and furnishes adequate preparation for either division of the Philosophical Course in College. The First and Second Forms of the Classical and Scientific Courses are identical. In the Third and Fourth Forms, the student preparing for the Latin Division substitutes Historical and Scientific subjects for the Greek of the Classical Course; while the student preparing for the Greek Division substitutes the Greek of the Third and Fourth Forms for the Latin and includes Historical and Scientific subjects.

III. The Scientific Course extends through four years and prepares for the Courses in General Science, in Biology, in Chemistry, and in Civil, Mechanical and Electrical Engineering in College. For the Vergil and the Cicero of the Latin Scientific Course, it substitutes one term of Advanced English, one term of Chemistry, and two years of German.

Students who are able to accomplish more work in the allotted time than is required by the Course may pursue honor work in the Classics by reading, under the instructor's direction, Cæsar's Civil War, Cicero's Letters, or Vergil's Eclogues, and Books IV, V, VI of the Iliad, or the Cyropædia.

Students will be admitted to the Form for which they are prepared.

Students who do not intend to enter College, but who desire a comprehensive academic training, will find the Scientific or the Latin Scientific Course well adapted to prepare them for teaching or for business.

Special classes in History and Literature are maintained to meet adequately the requirements of applicants for examination and registration as students at law, under the rules adopted by the Supreme Court of Pennsylvania.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. CLASSICAL COURSE.

FIRST FORM.

I. TERM—Algebra, 5, Latin, 5,	U. S. History, 5, English, 5.
II. TERM—Algebra, 5, Latin, 5,	English, 5, U. S. History, 5.
III. TERM—Geometry, 5, Latin, 5,	U. S. History, 5, English, 5.

SECOND FORM.

I. TERM—Higher Arithmetic, 5, Latin, 5,	Ancient History, 5, Rhetoric, 5.
II. TERM { Bookkeeping, Commercial Arithmetic, 5, Latin, 5,	Ancient History, 5, Rhetoric, 5.
III. TERM—Algebra, 5, Cæsar, 5,	Ancient History, 5, Literature, 5.

THIRD FORM.

I. TERM—Algebra, 5, Cæsar, 5,	Greek, 5, Elocution, 5.
II. TERM—Algebra, 5, Cæsar, 5,	Greek, 5, Literature, 5.
III. TERM—Algebra, 5, Cicero, 5,	Anabasis, 5, Literature, 5.

FOURTH FORM.

- | | |
|------------------------|--------------|
| I. TERM—Geometry, 5, | Cicero, 5, |
| Vergil, 5, | Anabasis, 5. |
| II. TERM—Geometry, 5, | { Ovid, } 5, |
| Vergil, 5, | { Cicero, } |
| Iliad, 5. | |
| III. TERM—Geometry, 5, | Iliad, 5, |
| Vergil, 5, | Anabasis, 5. |

II. THE LATIN SCIENTIFIC COURSE.**FIRST FORM.**

- | | |
|------------------------|-------------|
| I. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| II. TERM—Algebra, 5, | History, 5, |
| Latin, 5, | English, 5. |
| III. TERM—Geometry, 5, | History, 5, |
| Latin, 5, | English, 5. |

SECOND FORM.

- | | |
|-------------------------------|---------------------|
| I. TERM—Higher Arithmetic, 5, | Ancient History, 5, |
| Latin, 5, | Rhetoric, 5. |
| II. TERM { Bookkeeping, | Ancient History, 5, |
| { Commercial Arithmetic, 5, | Rhetoric, 5. |
| { Latin, 5, | |
| III. TERM—Algebra, 5, | Literature, 5, |
| Cæsar, 5, | Ancient History, 5. |

THIRD FORM.

- | | |
|--------------------------------------|----------------|
| I. TERM—Algebra, 5, | Elocution, 5, |
| Cæsar, 5, | |
| German, 5, or History of England, 5. | |
| II. TERM—Algebra, 5, | Literature, 5, |
| Cæsar, 5, | |
| German, 5, or Civics, 5. | |

- III. TERM—Algebra, 5, Literature, 5,
 Cicero, 5,
 German, 5, or Botany, 5.

FOURTH FORM.

- I. TERM—Geometry, 5, *German, 5, or French, 5,*
 Vergil, 5, *or Chemistry, 5,*
 Cicero, 5, *or Physics, 5.*
- II. TERM—Geometry, 5, *German, 5,*
 Vergil, 5, *or French, 5,*
 { Cicero, } *or Chemistry, 5,*
 { Ovid, } *or Physics, 5.*
- III. TERM—Vergil, 5, *German, 5,*
 Solid Geometry, 5, *or French, 5,*
 or Chemistry, 5,
 or Physics, 5.

III. THE SCIENTIFIC COURSE.

FIRST FORM.

- I. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- II. TERM—Algebra, 5, History, 5,
 Latin, 5, English, 5.
- III. TERM—Geometry, 5, History, 5,
 Latin, 5, English, 5.

SECOND FORM.

- I. TERM—Higher Arithmetic, 5, Ancient History, 5,
 Latin, 5, Rhetoric, 5.
- II. TERM { Bookkeeping, Ancient History, 5,
 Commercial Arithmetic, 5, Rhetoric, 5.
 Latin, 5,
- III. TERM—Algebra, 5, Literature, 5,
 Cæsar, 5, Ancient History, 5.

THIRD FORM.

- | | |
|-------------------------------------|------------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Elocution, 5. |
| II. TERM—Algebra, 5,
Cæsar, 5, | German, 5,
Literature, 5. |
| III. TERM—Algebra, 5,
Botany, 5. | German, 5,
Literature, 5. |

FOURTH FORM.

- | | |
|---|---|
| I. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | History of England, 5,
German, 5,
or French, 5. |
| II. TERM—Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |
| III. TERM—Solid Geometry, 5,
Physics, 5,
or Chemistry, 5, | German, 5,
or French, 5. |

METHODS OF INSTRUCTION.

The Preparatory Curriculum naturally falls into eight principal lines of study, viz.: English, French, German, Latin, Greek, History, Mathematics, and Natural Science. These combine, in due proportion, the cultural, the disciplinary, and the practical elements of intermediate education. The two great divisions of modern study, the Classical and the Scientific, are accorded adequate and appropriate preparation. The subject, facilities, and methods of the various departments are explained below.

I. THE ENGLISH LANGUAGE.

A thorough grounding in the principles of English Grammar is indispensable to the student's progress in the subsequent language studies. The continuous application of this knowledge in Composition, and the constant comparison with the forms and idioms of the Ancient Languages, prepare the way for the study of elementary Rhetoric, and the appreciative reading of English and American Literature. This work is done in the First Form.

In the Second Form a review in the principles of English Grammar is given, and a practical application of the same, together with rhetorical structure in paragraph writing and composition.

In the Third Form the first term is devoted to the study of Elocution, and the remaining two terms take up the study of Literature. The reading and study of the masterpieces of English and American Literature are maintained by means of daily recitations. The work required is identical with the "Scheme of Uniform Entrance Examinations in English Language and Literature," adopted by the "Association of Colleges and Preparatory Schools of the Middle States and Maryland." It comprises (a) careful reading of representative works of certain authors, as literature; (b) thorough study as to "subject-matter, form and structure" of other selections.

II. THE LATIN LANGUAGE.

The Course includes four and two thirds years of Latin, embracing four books of Cæsar, six orations of Cicero, six books of Vergil, and twelve hundred lines of Ovid, besides a complete Course in Grammar and Composition.

Careful drill is given in the declensions and conjugations, in the use of the moods and the sequence of tenses, in the ready reading of the Latin text, in sight reading and in accurate translations into idiomatic English. Attention is given to the important personal, historical, and political elements in the writings of Cæsar and Cicero. In Vergil, the student is introduced to the poetry, legend, religion, and art of Rome. He is taught to investigate the allegorical, archæological, and mythical allusions of the *Æneid*, and to appreciate it as the mirror of the life of the Empire. Latin prosody is taught first from the text, and then from the grammar.

III. THE GREEK LANGUAGE.

The first two terms of the Third Form are spent in a thorough study of White's First Greek Book. In the third term Xenophon's *Anabasis* is read, and special attention is given to acquiring a vocabulary and to the forms and syntax of nouns, pronouns, and adjectives. In the first half of the Fourth Form the reading of Xenophon is continued. During the last half year Homer's *Iliad* is read, and the difference between the Homeric and Attic Forms is noted. Throughout the Course, Prose Composition is frequently required for the purpose of acquiring a vocabulary and a knowledge of syntax. The Course includes four books of the *Anabasis*, four books of the *Iliad*, besides the Grammar and Prose Composition.

IV. THE GERMAN LANGUAGE.

One year's study of German is required of members of the Third and Fourth Forms of the Scientific Course. The same work may be elected by the members of the corresponding form of the Latin Scientific Course instead of the science subjects of that Course. In the study of German, the aim is a thorough acquaintance with declensions and conjugations; facility of pronunciation; quick recognition of words both by the eye and the ear; as extensive a vocabulary as the time will allow; and by constant practice the laying of a foundation for reading, writing, and speaking the language.

V. HISTORY.

The Course in History includes a survey of the History of the United States, of England, of Greece, and of Rome. The aim is to acquaint the student with the life, the genius, the institutions, and the achievements of the respective peoples, and their part in the wider history of mankind.

Additional Courses are offered in Ancient, Mediæval, and Modern History, and extra Courses in the historical readings required of applicants for examination and registration as students at law by the Supreme Court of Pennsylvania.

VI. MATHEMATICS.

Arithmetic. To students who are fitting themselves for business, a Course is given in practical business Arithmetic, involving all the ordinary problems and practices in the business world. To those who are preparing for college or for teaching, instruction is given in the theory and science of Arithmetic. Pupils are expected to master the principles and then to formulate their own rules.

Algebra. The Third Form course extends through one year, and includes a knowledge of the fundamental principles, Factoring, Divisors, and Multiples, Fractions, Equations, Involution, Evolution, Theory of Exponents, Radicals, and Quadratic Equations. Daily black-board work serves to apply the principles taught. The student is required both to know the methods of the solution of problems and also to explain the operation to the class.

The First Form takes up Algebra for the first two terms. The work is intended to give the pupils a knowledge of algebraic principles and to assist them in their Arithmetic. The third term is devoted to Concrete Geometry and Mechanical Drawing.

Plane and Solid Geometry. The instruction consists in daily recitations for three terms on the Theorems and Problems given in the text-book, with original demonstrations of propositions by the students from hints and figures given in the classroom. Besides this, considerable attention is given to the solution of original Propositions, and the application of principles thus learned to the solution of numerical problems.

Bookkeeping. A practical introduction to the science of accounts is secured in the term devoted to mastering the principles of Double Entry Bookkeeping. Careful attention is given to business forms, to the usages of Banks, and to the elements of Commercial Law. The subject may be pursued in its more extended and intricate application, as an elective, by properly qualified students.

VII. SCIENCE.

Botany is taught by text-books, field exercise, plant analysis, and weekly lectures. A brief outline is first obtained of plant structure, physiology, growth and reproduction. The subject is then re-

viewed by daily drill in analyzing, recording, classifying, and preserving specimens. The recorded analysis of fifty plants is required. Lectures explaining special forms of vegetable growth, the flora of this country, the cultivation, uses, and history of plants complete the work.

Physiology. Every effort is made to impart clear ideas of the structure, parts and functions of the human body. Special attention is given to the chemistry of foods, the laws of health, the effects of stimulants and narcotics. Suggestions are constantly made as to poisons and their antidotes, the care of the sick, disinfection and sanitation, and accidents and emergencies. Charts, manikin, and preparations are used in class.

Physics. The student is ground in the elements of mechanics and physics. The apparatus of the College Laboratory is available for use. The historical beginnings of each subject, and subsequent development, are sketched in brief lectures. No pains are spared to familiarize the pupil with the laws of these sciences, by instruction, experiments, review, and repeated examination. The truth of principles is proved, except where the demonstration involves mathematics of the higher Course in College.

Chemistry. The Course in Chemistry extends throughout the year, and includes General Chemistry and Qualitative Analysis.

(1) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history, and uses of the non-metallic elements and their compounds.

(2) **Descriptive Chemistry.** Text-book, lectures, and laboratory experiments. The properties, preparation, history and uses of the metallic elements and their compounds.

(3) **Qualitative Analysis.** In the first part of the term chemical reactions are studied in the laboratory, classroom, and text-book, after which fifty compounds, mixtures, and industrial products are determined. Each student reports individually and is questioned on the methods of determination. Twelve hours laboratory work a week required.

VIII. ORATORY.

Class Exercises. Members of the Fourth Form prepare and deliver one original oration each term. All other students have regular exercises in Composition and Declamation throughout the year. Public exercises are held before the faculty and students of the Academy. Visitors are cordially invited to these exercises.

In addition to the private rehearsals for the work above indi-

cated students in the Third Form receive daily instruction in elocution during the fall term. The Course includes careful drill in the Elementary sounds in Articulation and in Expression; in Analytical Reading, including the Bible and Hymns; and the reading of Shakspeare.

IX. SPECIAL BRANCHES.

Bible Study. The study of the Bible is pursued as a regular weekly recitation throughout the First, Second, and Third Forms, in all Courses of study. A scheme of study is arranged at the beginning of each year. It is intended that the successive schemes for the various years of the Course will cover the Life of Christ, the historical portions of the Old Testament foreshadowing the Christ, and the history of the Apostolic Church.

The Study of Music may be pursued by Academic students in the School of Music.

Drawing. All students of the Academy may receive throughout the year weekly lessons in Free-hand Drawing and Penmanship without extra charge. Special individual instruction in Drawing in the Art Studio is afforded at twenty-four dollars per annum.

X. HEALTH AND PHYSICAL CULTURE.

The Tustin Gymnasium affords opportunity for physical exercise. The Directors of the Gymnasium give regular class exercises to the students of the Academy. Attendance upon physical training in the Gymnasium is obligatory during the Winter Term.

The Athletic Association of the Academy has been formed to encourage and regulate athletic sports. The Association is allowed to arrange match games with other similar bodies by first securing the consent of the Principal.

PUBLIC EXHIBITIONS.

THIRD FORM.

The Public Exhibition in Declamation by the Third Form will take place on Saturday evening, April 10, 1915, in Bucknell Hall.

FOURTH FORM.

The closing exercises of the Academy will be the Public exhibition in Oratory of the Fourth Form, on June 12, 1915.

Diplomas and Certificates will be conferred Tuesday, June 15, 1915.

GENERAL INFORMATION.

ADVANTAGES.

To the student seeking preparation for College, the Academy offers unusual inducements. Its proximity to the College secures to him an atmosphere of study, acquaintance with the guides and companions of his future Course, and the benefit of numerous literary exercises to be found only in College towns. He has access to the College Library and Reading Room. The Academy is designed to fit pupils thoroughly for College and Technical Schools, and to lay broad and solid foundations for all subsequent scholarly culture and for the successful conduct of everyday affairs.

GOVERNMENT.

Students are encouraged to regard self-government as the only true government. It will be the constant endeavor to secure uprightness of character, gentlemanly deportment, and diligent application to work, by kind treatment, and high standards in conduct and study.

I. ADMINISTRATION.

1. The general control of the Academy is vested in the President of the University.

2. The government of the Academy, subject to such control, rests with the Principal of the Academy.

3. The government of each Hall is vested in the Instructor in charge, who resides in the Hall and enforces regulations for the Hours of Study, Academy Property, Hygienic Precautions, and General Deportment, and such other prudential regulations as may be ordered by the joint concurrence of the President of the University and the Principal of the Academy.

4. Each instructor shall have charge of his classes with reference to attendance upon recitations. He shall report to the Principal cases of non-attendance, and inexcusable failure on the part of students to prepare regular lessons or special work assigned.

II. VIOLATION OF RULES.

1. Any officer of the Institution becoming cognizant of any violation of the regulations by any pupil shall report the same to the Principal of the Academy, who shall make a record of the fact in a book provided for the purpose.

2. Every violation of the laws and prudential regulations of the Academy will subject the offender to a penalty of demerits, graded according to the flagrancy and frequency of the offense.

3. When the sum of a pupil's demerits equals ten it shall be the Principal's duty to notify the parent or guardian of the offender, specifying the offense; for every additional ten demerits like notification shall be made.

4. Additional disciplinary penalties in the form of reprimand, "campus," suspension, dismissal or expulsion, according to the necessities of the case, will follow repeated violations.

BUILDINGS AND ROOMS.

The Academy Buildings are described in detail in the introductory pages of the Catalogue.

The Main Building contains, besides its accommodations for other school and boarding purposes, rooms for students. The rooms are designed to accommodate two students each, and are twenty feet by twelve feet, and fourteen feet high; furnished with new folding beds, washstands, chairs, mirror and table.

The East Hall contains combined study and sleeping rooms, each designed for two students. These rooms are fifteen feet by twelve feet, with high ceilings, and contain two commodious closets and two single wire mattress beds with all necessary furniture.

ARTICLES REQUIRED.

Each student should be provided with an umbrella, overshoes, table napkins, towels, soap, and other articles usually required for personal comfort. All articles for the laundry should be marked with the owner's name.

BOARDING.

All students from a distance will occupy rooms and will board in the Academy, except for reasons jointly satisfactory to the President of the University and the Principal of the Academy.

The Principal and his family, the Instructors, and the Matron live in the building, take their meals with the boarders, and strive in all possible ways to secure the welfare and happiness of the students. The Instructors occupy rooms adjacent to the students' apartment. The appointments of the Dining Room, the character of the table supplies, the household service in general, are designed to furnish the comforts of a first-class boarding house. So far as may be warranted by the deportment of the students, there will be absent from the home life of the school all needless uniformity and irksome limitations, which disregard the reasonable individual preference of pupils.

The Academy gives to furnished rooms daily and complete attention, provides and washes all bedding and bed clothing, and supplies and cares for all lights.

Engagements for board and rooms are expected to continue without change to the end of the school year for which they are made.

APPLIANCES.

The Academy is in possession of excellent apparatus for instruction. A select Reference Library, containing Encyclopedias, Lexicons, Dictionaries, Atlases, and various other helps, is accessible to students at all hours. The Classical Recitation Rooms are provided with Kiepert's Wall Maps of Ancient Geography, and with Reinhard's Album of Ancient Antiquities, mounted. Metric, apparatus, Maps and Globes render assistance in other directions.

The apparatus of the College also is accessible to the classes for purposes of experiment and illustration.

The College Library, numbering thirty thousand volumes, is available for all students.

SCHOOLROOM.

In order to insure favorable conditions of study, the Academy maintains a commodious and well-appointed schoolroom. The school life centers in this room. Here, except when engaged in recitations, day students prepare their work, unless excused for a part of the time, for good cause; here, also, all the younger students of the lower forms prepare for their recitations. Advanced students and those of maturer years, who have acquired habits of independent study, are granted the privilege of preparing part of their work in

their rooms, provided that they maintain high scholarship and excellent deportment.

HOURS.

The time devoted to study and recitation amounts to nine hours every week-day, except Saturday, when it is only two hours. This time should be sacred to its purpose. Parents of day pupils are requested to coöperate with the school in securing attention to evening study hours, and to avoid furnishing occasions or granting excuses for absence.

Students from a distance should be in Lewisburg on the day preceding the opening of each term, and no student should leave until the term has closed. Punctuality in attendance is essential to success in school work.

For terms and vacations, see the Calendar of the University.

STANDING AND PROMOTIONS.

The weekly averages of marks for recitations are recorded, and also failures in conduct and attendance. The scale for such markings ranges from 10, or perfect, to 0, or inexcusable failure. Unexcused absences count as zero.

Monthly and term examinations are held in the studies thus far completed, and term reports of the average in scholarship, attendance, and conduct of each student are sent to parents or guardians by the Principal.

No student is promoted to the next higher class whose grade in any study is less than 7.

Students who complete the Preparatory Courses of Study are admitted to standing in corresponding divisions of the Freshman Class in the College, upon the Principal's certificate, without examination.

All students who complete in a satisfactory manner any of the Courses of Study, and who have sustained irreproachable character during their school residence, shall be entitled to the diploma of the Academy.

Students attaining an average standing of 9 are encouraged to take work additional to the Regular Courses of Study.

PRIZES

THE HARRY S. HOPPER PRIZE.

Mr. Harry S. Hopper, of Philadelphia, Chairman of the Board of Trustees, offers an annual prize for excellence in Composition.

This prize for 1914 was awarded to Harry R. Bitterman.

THE DAVID PORTER LEAS PRIZE.

David P. Leas, of Philadelphia, Treasurer of Bucknell University, offers an annual prize to that member of the Third Form who shall excel in the Annual Exhibition of the Third Form in Declamation.

This prize for 1914 was awarded to Harry R. Bitterman.

THE PRINCIPAL'S PRIZE.

Principal Wilcox offers an annual prize to that member of the Fourth Form who shall pronounce the best oration at the Academic Graduating Exhibition.

This prize for 1914 was awarded to David Nathaniel Boswell.

LITERARY SOCIETY.

This is an organization of students for mutual improvement in literary and oratorical exercises. It has a large and convenient hall in the Main Academy Building, where meetings are held on Friday evenings.

RELIGIOUS SERVICES.

The duties of each day are opened with devotional exercises, which all students are required to attend. Devotional exercises are also held every evening, just before the evening study hour. All academic students residing on the University campus are required to attend these exercises.

Regular attendance at Sunday school and upon public worship at some church on Sunday morning, is required; also upon services on Thanksgiving Day, and the Day of Prayer for Colleges. Attendance upon Christian Endeavor or other like Young People's Society, and the mid-week prayer-meetings, while voluntary, is strongly urged upon students.

Parents or guardians are required to indicate to the Principal the church which they desire their sons or wards to attend.

The Academy students maintain a branch of the Young Men's Christian Association, which holds a weekly prayer-meeting on Tuesday evenings.

EXPENSES OF ACADEMY STUDENTS.

	<i>Per Annum.</i>
Tuition, Board, Furnished Room, Heating, Light, Care,	
Washing and Incidentals.....	\$290.00
Tuition and Incidentals to day pupils.....	85.00

A student engaging a room is required to make a deposit of ten dollars. This amount is credited upon the regular term bills. Should a student for good reasons be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

All charges are payable to the Registrar of the University in advance, at the beginning of each term.

No student is entitled to his place in his class until he has made settlement for the term bills.

An extra charge will be made for washing more than twelve pieces per week.

Students who remain in the Academy during the holiday or spring vacation will be charged at the rate of \$5.00 per week. Table boarders will be charged the regular rate, \$3.50 per week.

Free scholarships covering tuition are provided in all the departments of the University for the children of Ministers of the Gospel *in actual service*. Tuition is rated at \$36 a year.

The expenses for Music and Printing for Exhibition and Anniversary occasions are paid by the classes for which such expenses are incurred.

For information respecting the Academy, address the President of the University, or the Principal, Walter S. Wilcox, ScM.

THE INSTITUTE.

INSTRUCTORS.

THOMAS ALPHEUS EDWARDS, A.M.,
DEAN OF THE DEPARTMENT FOR WOMEN,
AND INSTRUCTOR IN PSYCHOLOGY AND ETHICS.

MARY GEORGIANA STANTON, PH.B., PRECEPTRESS,
TEACHER OF GERMAN, AND PHYSIOLOGY AND HYGIENE.

MARGARET ELLEN KALP, A.B.,
TEACHER OF LATIN.

EDITH SCHILLINGER,
TEACHER OF ELOCUTION AND GYMNASTICS.

EUDORA REGINA HAMLER, A.B.,
TEACHER OF ELOCUTION.

PAUL GEORGE STOLZ, A.M.,
DIRECTOR OF THE SCHOOL OF MUSIC,
AND TEACHER OF VOCAL MUSIC.

CHARLOTTE G. ARMSTRONG,
VIOLIN AND HISTORY OF MUSIC.

HARRIET MAY HOLLINGSHEAD,
PIANO AND PIPE ORGAN.

MARY ELIZABETH SLEAR,
PIANO AND HARMONY.

PRISCILLA RICHARDSON HARDESTY,
PIANO, PIPE ORGAN AND APPRECIATION OF MUSIC.

ETTA ALTHEA BROWN,
VOICE.

ROSE ELIZABETH RAINEY,
TEACHER OF COOKERY.

HELENA WAY,
TEACHER OF ART AND SEWING.

JOSEPH LINCOLN CHALLIS, A.M.,
TEACHER OF LATIN AND HISTORY.

JOHN WINTER RICE, B.S.,
TEACHER OF PHYSICS.

EDWARD JOHN RICHARDS, A.B.,
TEACHER OF RHETORIC AND LITERATURE.

JOHN FRANCIS WINKELBLECH, A.B.,
TEACHER OF MATHEMATICS AND GREEK.

DIRECTORY OF THE ALUMNÆ.

OFFICERS OF THE GENERAL ALUMNÆ ASSOCIATION.

President, MRS. KATE McLAUGHLIN BOURNE.

Vice President, MRS. MARY THOMAS GERHART.

Recording Secretary, MISS MARY McLAUGHLIN.

Corresponding Secretary, MRS. MARY BARTOL THEISS.

Treasurer, MISS DOROTHY WALLS.

Board of Managers.

THE OFFICERS OF THE ASSOCIATION, AND MRS. KATHERINE
B. LARISON, AND MRS. MARTHA W. WOLFE.

The Alumnæ Association holds its anniversary on Tuesday afternoon of Commencement week.

OFFICERS OF THE LEWISBURG ALUMNÆ CLUB.

President, MRS. WILHELMINA DARLINGTON BUTLER.

Vice President, MRS. MARY WILSON SIMPSON.

Secretary, MRS. MARY BARTOL THEISS.

Treasurer, MRS. KATHERINE BROWN LARISON.

The Lewisburg Alumnæ Club meets at the Women's College on the second Tuesday of each month during term-time.

OFFICERS OF THE PHILADELPHIA ALUMNÆ CLUB.

President, MISS CATHERINE I. ENGELBERT.

Vice Presidents, MRS. I. H. O'HARRA, MISS HANNAH GOODMAN.

Recording Secretary, MISS LETITIA MATTHEWS.

Corresponding Secretary, MRS. ATHOL V. WISE.

Treasurer, MRS. DEWEY A. COBB.

Historian, MISS MARY STILL, West Chester.

The Dean of the Department for Women will esteem it a favor if any graduate who changes her residence will give notice of her new address. He will also be grateful for any information that will assist in making the directory of the graduates and former students complete.

NAMES OF STUDENTS.

GRADUATES, CLASS OF 1914.

NAME.	RESIDENCE.
KATHERINE CLAYTON,	Lewisburg
EDITH VIRGINIA FOCHT,	Lewisburg
BEULAH MAY HUMMEL,	Lewisburg
ALICE JOHNSON,	Lewisburg
LEAH LINDIG,	Lewisburg
MARY ELLEN PROWANT,	Lewisburg
HELEN LORRAINE SHAFFER,	Lewisburg

UNDERGRADUATES.

NAME.	RESIDENCE.	ROOM.
RUTH PYLES,		Women's College
	<i>Camp Springs, Md.</i>	
ELIZABETH WARD STEPHENS,		South Sixth Street
	<i>Lewisburg.</i>	
MARY NINA BOSWELL,		South Third Street
	<i>Lewisburg.</i>	
MARY ELLEN WILSON,		Women's College
	<i>St. Charles, Minn.</i>	
JOY TILLMAN PROSS,		Market Street
	<i>Lewisburg.</i>	
OLIVE REGINA ANDERSON,		Women's College
	<i>Monessen.</i>	
JESSIE COOPER,		Women's College
	<i>Scranton.</i>	
EDITH CRANE,		Milton
	<i>Milton.</i>	
MARY ANNA HANKINS,		Women's College
	<i>Bridgeton, N. J.</i>	
ANNA LAURA HOLDEN,		Women's College
	<i>Corsica.</i>	
CHARLOTTE LANING,		Women's College
	<i>Bridgeton, N. J.</i>	

NAME.	RESIDENCE.	ROOM.
JUNE ETHEL MULLIN,	<i>Saxton.</i>	Women's College
MARION RENSHAW PETITTE,	<i>Brooklyn, N. Y.</i>	Women's College
GEORGIA SNYDER,	<i>Linglestown.</i>	Women's College
ELINOR STOUT,	<i>Wenonah, N. J.</i>	Women's College
GRACE VAN BUSKIRK,	<i>Lewisburg.</i>	Women's College
META WHYTE,	<i>Philadelphia.</i>	Women's College
	Total, 17.	

STUDENTS IN DOMESTIC SCIENCE.

ESTHER HANNA BAUMGARDNER,	<i>Sunbury.</i>	Women's College
MARY BARRICK BEATTY,	<i>Port Royal.</i>	Women's College
FRANCES LEIGHTON BROWN,	<i>Tunkhannock.</i>	Women's College
RUTH MARIE CANNON,	<i>Nanticoke.</i>	Women's College
DARLE FAYE DAVIS,	<i>Allenwood.</i>	Allenwood
MARGARET DOLPHIN,	<i>Kane.</i>	Women's College
MARGARET HILL EVANS,	<i>Nanticoke.</i>	Women's College
HELEN HADDEN,	<i>Doylestown.</i>	Women's College
LEILA GWENDOLEN HANNA,	<i>Warren.</i>	Women's College
ZELDA JANE HAWES,	<i>Cherry Tree.</i>	Women's College
ETHEL HIETER,	<i>Lewisburg.</i>	Third Street
HELEN MAFFETT HERRITT,	<i>Jersey Shore.</i>	Women's College
ELIZABETH BELINDA LAIRD,	<i>Tyrone.</i>	Women's College

NAME.	RESIDENCE.	ROOM.
HENRIETTA FRANCES MCCARTY,	<i>Allenwood.</i>	Allenwood
GERTRUDE MARY MCGOEY,	<i>Coudersport.</i>	Women's College
MARJORIE FERRIS McNALL,	<i>Muncy.</i>	Women's College
MABEL DELIA MINCH,	<i>Bridgeton, N. J.</i>	Women's College
JOSEPHINE FLORELLE READING,	<i>Franklin.</i>	Women's College
MURIEL BELLE RIDER,	<i>Millville.</i>	Seventh Street
FAY MARGUERITE SCHOCH,	<i>Huntingdon.</i>	Women's College
GENEVIEVE SHUTTERLY,	<i>Monessen.</i>	Women's College
GRACE ELLEN STARR,	<i>Homer, N. Y.</i>	Women's College
EVELYN HOPE VOSBURGH,	<i>Camden, N. J.</i>	Women's College
ANNA ANGELINE WAITE,	<i>Lock Haven.</i>	Women's College
MARGARET BRIGHT WALLACE,	<i>Palmyra, N. J.</i>	Women's College
ZERBA THERESA WEBER,	<i>Mechanicsburg.</i>	Women's College
CARMEN CAMILLA WHITEBRED,	<i>Wilkes-Barre.</i>	Women's College
TRELLA ESTHER YODER,	<i>Belleville.</i>	Women's College
	Total, 28.	

STUDENTS IN ELOCUTION.

NAME.	RESIDENCE.
OLIVE REGINA ANDERSON,	Monessen
MARY ADELAIDE BYERS,	Milton
ISABELLE FRANCES BOND,	Lewisburg
LOUISE ANTOINETTE BASSELL,	Philippi, W. Va.
MARY MAGDALENE BUBB,	Dalmatia
DAVID NATHANIEL BOSWELL,	Washington
MARY NINA BOSWELL,	Washington

NAME.	RESIDENCE.
CLAIRE CALLAHAN,	Milton
FLOSSIE E. CLARK,	Sunbury
EDWARD OLIVER CLARK,	Townson, Md.
EDITH CRANE,	Milton
EDGAR CARLTON CAMPBELL,	Shunk
BERTHA CASTER,	Lehighton
BEATRICE ELY,	Milton
KATHRYN BURDINE EILENBERGER,	Stroudsburg
HAROLD CHARLES EDWARDS,	Gouldsburg
CARRIE DUNBAR FORESMAN,	Lewisburg
DAVID GERALD FITZGERALD,	Mt. Pleasant
RALEIGH MILTON FELTON,	Connellsville
HAZEL MARIE GAY,	Homer, N. Y.
GOLDIE GUBIN,	Northumberland
ELIZABETH LOUISE HAHN,	Meshoppen
HARRIET EDNA HILTY,	Vandergrift
NORMAN RAE HILL,	Newberry
HELEN HOUGHTON,	Lewisburg
SARA IRENE HILBISH,	Northumberland
MADONNA HARRIS,	Laceyville
MARY JANE IREY,	Danville
NERISSA DAGMAR JAMES,	New York
AILEEN AUDREY JOHNSON,	Avonmore
MARIE MARION KIESS,	Williamsport
FLORINE MICHAEL,	Laceyville
JOSEPH EARL MALIN,	Frazer
VERNIE GRACE NOLL,	Lewisburg
ERIC ADAM OESTERLE,	Woodstown, N. J.
EDNA ADETA OVERFIELD,	West Pittston
RUTH PYLES,	Camp Springs, Md.
JESSIE IRENE POTTS,	Greensburg
SARA ASENATH PARK,	Ben Avon
KATHRYN ELIZABETH REDELIN,	Freeland
DAYTON LEO RANCK,	New Columbia
EDWARD J. RICHARDS,	Homestead
HELEN LORRAINE SHAFFER,	Lewisburg
LOIS EDNA SMITH,	Milton
ELINOR STOUT,	Wenonah, N. J.
MYRNA RUTH STRICKLER,	Lewisburg
ORA BEATRICE SMITH,	White Deer
GRACE VAN BUSKIRK,	Lewisburg
VIRGINIA BLANCHE WOOD,	Washington

NAME.	RESIDENCE.
YEURITH LAVINA WESTBAY,	Elizabeth
META WHYTE,	Philadelphia
AMANDA LAURA WHITAKER,	Millville, N. J.
TRELLA YODER,	Belleville
Total, 53.	

STUDENTS IN ART.

JEANETTE SOPHIA ARNDT,	Milton
SARA GRAY BARNITZ,	Mifflinburg
ADELIN ELIZABETH BERNHARDT,	Lewisburg
EDITH CRANE,	Milton
ANNA LAURA HOLDEN,	Corsica
CAROLYN HOPPER,	Lewisburg
ELIZABETH J. LOVE,	Milton
JUNE ETHEL MULLIN,	Saxton
Total, 8.	

SUMMARY.

Institute Courses	17
Domestic Science	28
Elocution	53
Art	8
Music	114

COURSES OF STUDY.

The Bucknell Institute offers to young women three courses of study, the General, the Classical, and the Scientific. The General Course extends over five years, leading to a diploma which admits to advanced standing in college. Students are admitted to advanced standing, if upon examination they are found to have satisfactory knowledge of the branches which the class they propose to enter has already completed.

Credentials are accepted in the studies of the First, Second and Third Years from schools whose curricula are equivalent to that of Bucknell Institute; also from accredited private teachers, in studies which are *continued* after entrance.

The Classical and the Scientific Courses offer thorough preparation for the Freshman Class in College. Graduates of accepted high schools, with a four years' Course, are admitted to the General Course and graduated with diploma and medal upon completion of the year's work. This work may be chosen in English, French, German, Latin, Mathematics, History, Pedagogy, Science, or Domestic Economics. The work will be taken under college professors, and will be accepted for a college degree if the student wishes to pursue further study. This arrangement is designed to meet the needs of the large number of young women who after graduating from high school wish to pursue some special line of work, but for various reasons do not wish to take a four-year College Course.

I. THE GENERAL COURSE.

The General Course embraces, in MATHEMATICS, Algebra and Geometry, plane and solid, and Higher Algebra with Trigonometry and Analytical Geometry as electives; in LATIN, four years; in GERMAN, two years, and a third year elective with FRENCH; in FRENCH, one year; and in ITALIAN and SPANISH, an optional course; in SCIENCE, Physical Geography, Botany, Physics, Physiology, Chemistry. In these branches the students have the advantages afforded by the College Observatory, Laboratory, and Museum. The Course

also includes Rhetoric, Composition, Civil Government, Psychology, and History of Art.

Special attention is given to History and Literature, to the former of which six and to the latter of which three terms are devoted, besides the reading of English and American authors required for admission to College.

Attention is also given to preparation of the student for home-making, and for the study of Domestic Science, Household Art, Hygiene and Sanitation.

II. THE CLASSICAL COURSE.

The Classical Course embraces, in MATHEMATICS, Algebra, Geometry, plane and solid; in LATIN, Grammar and Composition, Cæsar, Vergil, Cicero's Orations, Ovid, in all four years; in GREEK, Grammar and Composition, Xenophon's Anabasis, Homer's Iliad, in all two years; in HISTORY, General History, and Greek and Roman History.

Students who complete the Classical Course are admitted to the Freshman Class in College as candidates for the first degree in Arts.

III. THE LATIN SCIENTIFIC COURSE.

The Latin Scientific Course corresponds to the Classical Course except that scientific subjects are substituted for the first two years of Greek.

Students who complete the Latin Scientific Course are admitted to the Freshman Class in College as candidates for the first degree in Philosophy.

Students who complete the Classical or Latin Scientific Course are granted diplomas of graduation.

Students who do not wish to pursue a Course of study may elect such subjects in connection with recitations of the regular classes as they may be qualified to pursue.

AGE REQUIREMENTS FOR ADMISSION.

The required age for admission to the first-year class or to pursue select studies is twelve years, and a proportionate increase of age for admission to advanced classes.

CURRICULA.

Arabic numerals indicate the number of recitations a week
in each subject.

I. THE GENERAL COURSE.

FIRST YEAR.

- | | |
|--|--------------------------|
| I. TERM—Algebra, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |
| II. TERM—Algebra, 5,
Latin, 5,
Drawing, 5, | English, 4,
Bible, 1. |
| III. TERM—Geometry, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |

SECOND YEAR.

- | | |
|--|--|
| I. TERM { Commercial Arithmetic, 5,
Business Forms,
Cæsar, Introduction, 5,
Ancient History, 5, | Rhetoric, 4,
Bible, 1. |
| II. TERM—Bookkeeping, 5,
Cæsar, 5, | Ancient History, 5,
Literature, 4,
Bible, 1. |
| III. TERM—Physical Geography, 5,
Cæsar, 5,
Ancient History, 5, | Literature, 4,
Bible, 1. |

THIRD YEAR.

- | | |
|---|--|
| <p>I. TERM—Algebra, 5,
 Cæsar, 5,
 German, 5, <i>or</i>
 History of England, 5,</p> | <p>Elocution, 4,
 Bible, 1.</p> |
| <p>II. TERM—Algebra, 5,
 Cicero, 5,
 German, 5, <i>or</i>
 Civics, 5,</p> | <p>Literature, 4,
 Bible, 1.</p> |
| <p>III. TERM—Algebra, 5,
 Cicero, 5,
 German, 5, <i>or</i>
 Botany, 5,</p> | <p>Literature, 4,
 Bible, 1.</p> |

FOURTH YEAR.

- | | |
|---|--|
| <p>I. TERM—Geometry, 5,
 Vergil, 5,
 Cicero, 5,</p> | <p>German, 5, <i>or</i>
 Physics, 5.</p> |
| <p>II. TERM—Geometry, 5,
 Vergil, 5,
 { Cicero, }
 { Ovid, } 5,</p> | <p>German, 5, <i>or</i>
 Physics.</p> |
| <p>III. TERM—Vergil, 5,
 Geometry, 5,</p> | <p>German, 5, <i>or</i>
 Physics, 5.</p> |

SENIOR YEAR.

- | | |
|--|--|
| <p>I. TERM—Rhetoric, 5,
 French, 5,
 German, 5,
 Solid Geometry, 5,
 Physiology, 5,
 Chemistry, 5,</p> | <p>Bible, 1,
 Composition, 1,
 Elocution, 1.</p> |
|--|--|

- II. TERM—English Literature, 5, Bible, 1,
 Comparative Psychology, 5, Composition, 1,
 French, 5, Elocution, 1.
 German, 5,
 Algebra, 5,
 Physiology, b, 5,
 Chemistry, 5,

- III. TERM—Child Psychology, 5, Bible, 1,
 American Literature, 5, Composition, 1,
 French, 5, Elocution, 1.
 German, 5,
 Trigonometry, 5,
 Physiology, c, 5,
 Chemistry, 5,

Senior students select with the approval of the Dean three major subjects, in the Senior year, General Course.

II. THE CLASSICAL COURSE.

FIRST YEAR.

- I. TERM—Algebra, 5, English, 4,
 Latin, 5, Bible, 1.
 History, 5,
- II. TERM—Algebra, 5, English, 4,
 Latin, 5, Bible, 1.
 History, 5,
- III. TERM—Geometry, 5, English, 4,
 Latin, 5, Bible, 1.
 History, 5,

SECOND YEAR.

- I. TERM { Commercial Arithmetic, 5, Rhetoric, 4,
 Business Forms, Bible, 1.
 Cæsar, Introduction, 5,
 Ancient History, 5,

- | | |
|--|--|
| II. TERM—Bookkeeping,
Business Forms,
Cæsar, 5, | Literature, 4,
Bible, 1,
Ancient History, 5. |
| III. TERM—Physical Geography, 5,
Cæsar, 5,
Ancient History, 5, | Literature, 4,
Bible, 1. |

THIRD YEAR.

- | | |
|--|-----------------------------|
| I. TERM—Algebra, 5,
Cæsar, 5,
Greek, 5, | Elocution, 4,
Bible, 1. |
| II. TERM—Algebra, 5,
Cicero, 5,
Greek, 5, | Literature, 4,
Bible, 1. |
| III. TERM—Algebra, 5,
Cicero, 5,
Greek, Anabasis, 5, | Literature, 4,
Bible, 1. |

FOURTH YEAR.

- | | |
|--------------------------------------|--|
| I. TERM—Geometry, 5,
Vergil, 5, | Cicero, 5,
Greek, Anabasis, 5, |
| II. TERM—Geometry, 5,
Vergil, 5, | { Cicero, }
{ Ovid, } 5,
Iliad, 5. |
| III. TERM—Geometry, 5,
Vergil, 5, | Iliad, 5,
Anabasis, 5. |

III. THE LATIN SCIENTIFIC COURSE.

FIRST YEAR.

- | | |
|---|--------------------------|
| I. TERM—Algebra, 5,
Latin, 5,
History, 5, | English, 4,
Bible, 1. |
|---|--------------------------|

II. TERM—Algebra, 5,	English, 4,
Latin, 5,	Bible, 1.
Drawing, 5,	

III. TERM—Geometry, 5,	English, 4,
Latin, 5,	Bible, 1.
History, 5,	

SECOND YEAR.

I. TERM {	Commercial Arithmetic, 5,	Rhetoric, 4,
	Business Forms,	Bible, 1.
	Cæsar, Introduction, 5,	
	Ancient History, 5,	

II. TERM {	Bookkeeping,	Ancient History, 5,
	Commercial Arithmetic, 5,	Literature, 4,
	Cæsar, 5,	Bible, 1.

III. TERM—Physical Geography, 5,	Literature, 4,
Cæsar, 5,	Bible, 1.
Ancient History, 5,	

THIRD YEAR.

I. TERM—Algebra, 5,	Elocution, 4,
Cæsar, 5,	Bible, 1.
German, 5, <i>or</i>	
History of England, 5,	

II. TERM—Algebra, 5,	Literature, 4,
Cicero, 5,	Bible, 1.
German, 5, <i>or</i>	
Civics, 5,	

III. TERM—Algebra, 5,	Literature, 4,
Cicero, 5,	Bible, 1.
German, 5, <i>or</i>	
Botany, 5,	

FOURTH YEAR.

I. TERM—Geometry, 5,	German, 5, <i>or</i>
Vergil, 5,	<i>Chemistry</i> , 5,
Cicero, 5,	<i>Physica</i> , 5.

- | | |
|--|--|
| II. TERM—Geometry, 5,
Vergil, 5,
{ Cicero, } 5,
{ Ovid, } | German, 5, <i>or</i>
Chemistry, 5, <i>or</i>
Physics, 5. |
| III. TERM—Geometry, 5,
Vergil, 5, | German, 5, <i>or</i>
Chemistry, <i>or</i>
Physics, 5. |
-

IV. THE COURSE IN DOMESTIC SCIENCE.

FIRST YEAR.

- | | |
|--|---|
| I. TERM—Chemistry, 5,
General Psychology, 5,
Cookery { Principles, 1,
Practice, 5, | Thesis,
Physical Training, 2,
Sewing, 2. |
| II. TERM—Chemistry, 5,
Personal Hygiene, 5,
Cookery { Principles, 1,
Practice, 5, | Thesis,
Physical Training, 2,
Mechanical Drawing, 1,
Sewing, 2. |
| III. TERM—Chemistry, 5,
Home Nursing and Emer-
gencies, 5,
Cookery { Principles, 1,
Practice, 4, | Thesis,
Physical Training, 2,
Domestic Architecture, 1,
Sewing, 2. |

SECOND YEAR.

- | | |
|--|--|
| I. TERM—Chemistry of Foods, 5,
Biology, 5,
Cookery { Principles, 1,
Practice, 4,
French, 5, | Thesis,
Physical Training, 2,
Methods of Teaching Do-
mestic Science, 1. |
| II. TERM—French, 5,
Cookery, 5,
Dietetics and Domestic Sani-
tation, 5,
Comparative Psychology, 5, | Thesis,
Physical Training, 2,
Invalid Cookery, 1,
Methods of Teaching, 1. |

III. TERM—Cookery, 5,	Thesis,
Bacteriology, 5,	Methods of Teaching, 1,
Child Psychology, 5,	Household Manage-
French, 5,	ment, 2.

Certificates of graduation are granted to students who complete the Domestic Science Course.

METHODS OF INSTRUCTION.

I. PSYCHOLOGY AND ETHICS.

Psychology is taught by text-book and informal lectures. The relation of Psychology to education is made a special feature of the Course.

(a) The first term is given to Descriptive Psychology, in which the facts and laws of mind are carefully studied.

(b) The second term is devoted to Comparative Psychology, a careful study being made of the development of the child mind, as well as of the appearance of mind in the lower animals.

(c) A Course is also given in Child Psychology, showing the relation of mind and body, and how the ideal of a sound mind in a sound body may be attained.

Special attention is given to problems arising out of family and social relations.

The Courses in Psychology are open as electives to College women.

II. PHYSIOLOGY.

The Course in Physiology, with special reference to Domestic Science, extends through the Senior year of the General Course and is elective also to College women. First is taken up General Physiology, including the plan of the human organism, the chemistry of the tissues, digestion, circulation, respiration, and excretion, the nervous system, and special senses. Then the Course takes up the subjects of Personal Hygiene and Emergencies; such as physical training, its value and limitations, clothing, foods, care of the body, effect of narcotics, and so on.

III. CHEMISTRY.

Descriptive Chemistry is taught by text-books, lectures, and experiments. The object of the Course is to give the student a general knowledge of the common elements, their sources, uses, compounds, and behavior toward other elements and compounds, and to drill the

student in writing formulæ and solving chemical equations. To accomplish this, each student will be expected to spend at least five hours each week in the Laboratory, studying the characteristics and reactions of the elements and their compounds, and performing the experiments outlined in the text and lectures. Notes will be kept by each student, describing the experiment and giving the equation which represents the reaction taking place.

The Course in Chemistry extends as a major throughout the year. It is taught with especial reference to domestic science. It treats especially of applications to daily life in the household, air, water, detergents, food materials.

IV. DOMESTIC SCIENCE.

The Course in Domestic Science offers instruction in both theory and practice in the subjects fundamental to a competent knowledge of Domestic Science.

Based on the principles of Chemistry, Physiology and Hygiene, Biology, Bacteriology and Psychology, the knowledge of cookery, dietetics, home-sanitation, household economy and home decoration, gained by the diligent student will meet the demands of successful practice in home, school or institution. To prosecute the work of this Course effectively, the student should have the equivalent of the usual four-year High School Course.

This Course is intended to fit young women to teach Domestic Science in High Schools and for the duties of the household. Further information can be obtained by addressing the Dean of the Department of Women.

The Course in General Cookery includes instruction in the care of the kitchen and all its appointments; the principles of cookery, as applied to baking, boiling, stewing, broiling, roasting, steaming; and practical demonstration of these principles in the cooking of meats, vegetables, eggs, pastries, cake, puddings, sauces, salads, and salad dressings, and desserts of various kinds.

V. LITERATURE AND ART.

LITERATURE is taught by topical outlines, the elaboration of which depends upon a sympathetic study of the masterpieces in connection with the lives and times of the writers. The subject is so presented that a vital experience results rather than an empty form of knowledge. The object of the Course is to cultivate and ennoble

the emotions, to stimulate the imagination, and to reinforce the will with strong and exalted motives.

(a) The Advanced Course in Rhetoric consists of daily themes, recitations, and consultations.

(b) English Literature is designed to give a general knowledge of the history of English literature from the Elizabethan to the Victorian periods, inclusive.

(c) American Literature is given with special reference to the national period.

THE HISTORY OF ART is offered in the Senior Year, General Course. The aim of the Course is to give a general knowledge of the development of art and to lead to an acquaintance with individual artists and their work. Some attention is given to the theories concerning the origin of the art-impulse itself, and the law of the mental evolution which has governed the history of art.

A full Course in HOUSEHOLD ART is offered by the Art Department.

VI. HISTORY.

History. Six terms are devoted to this study. The Course embraces General History, the History of the United States, of England, of Greece, and of Rome. Efforts are made to show the learner that History is not mere facts in chronological order, but a record of the development of civilization.

Civil Government. The origin and growth of our institutions, the functions of the various departments of the National, State, and local governments, the political history of the people, the interpretation and construction of the Constitution, are discussed.

VII. THE ENGLISH LANGUAGE.

Rhetoric is taught as a practical aid to English Composition. Daily exercises in composition are required.

English Composition is required throughout the Course. Classes in Composition meet weekly for general criticism and the assignment of work. One essay is required from each student monthly, and an exercise in rapid and concise writing is required weekly.

VIII. THE LATIN LANGUAGE.

Paradigms of Declension and Conjugation with the principles of Syntax, are introduced gradually, after many illustrations. English

sentences are translated into Latin, readiness in Latin Composition and a correct style being thus acquired.

The following Courses are offered: 1. Latin Grammar and Lessons; 2. Eutropius; 3. Cæsar, Gallic War; 4. Vergil, *Æneid*; 5. Cicero, Orations; 6. Ovid.

IX. THE GREEK LANGUAGE.

The first half of the Third Year is spent in acquiring sufficient knowledge of forms and inflections to commence the study of Xenophon's *Anabasis*. During the last half year, special attention is given to the inflection and syntax of nouns, pronouns, and adjectives. The reading of Xenophon is continued in the first term of the Fourth Year, and the forms and syntax of verbs made a special study. Homer is then read for one term and a half, and the difference between Homeric and Attic forms is noted. During the last half term Xenophon is reviewed, that the student may refresh her knowledge of Attic Greek, and may not find her transition to College needlessly difficult. Almost daily drill is given in turning into Greek, sentences based on the text of Xenophon.

The following Courses in Greek are offered to students in the Classical Course: 1. Greek Lessons; 2. Xenophon's *Anabasis*; 3. Homer's *Iliad*.

X. MODERN LANGUAGES.

1. French, Italian, and Spanish. The modern languages are taught by comparing them with the mother tongue of the pupil, if there be any relation between them. If there is none, they are compared with the Latin and Greek languages. In French, rules are taught by which the words that are not exactly the same in the two languages are easily made into French.

French Syntax is taught by examples and illustrations from readings. The grammar is taught from the language, and not the language from the grammar.

As far as practical only French is spoken in the classroom. Extracts are read from the best French literature. Conversations are held in French on the readings, stories are related, and compositions prepared in French by the pupil.

The aim is to teach the modern languages so that they can be spoken correctly.

The same method is used in teaching Spanish and Italian.

2. German. In the study of German the aim is to get knowledge of the language in an all-round way. This is accomplished not

alone through the study of grammar and the translation of German into English, but by daily practice in conversation, the committing to memory of poems and idioms, and through an acquaintance with biography and the different phases of German life. As little English as practicable is used in the classroom. Throughout the course there is constant sight reading, translation at hearing, and translation from English into German.

The reading of the second year includes the best German authors studied in connection with Keller's History of German Literature.

XI. MATHEMATICS.

Commercial Arithmetic. Two objects are considered in teaching the subject; first, to give the student a practical knowledge of all ordinary business problems and calculations; second, to develop her ability to think logically and rapidly. The memorizing of rules and mechanical processes is not required, but independent thought, logical analysis and neatness, clearness and accuracy in all written work are demanded.

Business Customs. A practical course in business records, involving the use of the cash book, the ledger, the day-book, etc. Students are required to make out bills and receipts, to use check books, and to make deposits in bank, using the proper forms. This practical work is supplemented by lectures on commercial banks, savings banks and building loan associations, insurance, mortgage and bond investments, and letters of credit.

Elements of Algebra. Three terms are given to this subject. There is thorough drill in the fundamental operations, and the idea that these are simply the applications of arithmetical processes to symbols of general value is kept constantly in mind. The Course includes Quadratic Equations, Theory of Exponents, Variation, and Series.

Geometry. The Course includes Plane and Solid Geometry. Besides the demonstrations of Theorems given in the text-book, original demonstrations and the solution of problems are required.

XII. SCIENCE.

Physics. The student is thoroughly grounded in the elements of mechanics and physics. The historical beginnings of each subject,

and subsequent developments, are sketched in brief lectures. No pains are spared to familiarize the pupils with the laws of these sciences by instruction, experiment, review, and repeated examination. The truth of principles is proved, except where the demonstration involves the higher mathematics. The apparatus of the College is available for class use.

Physical Geography lays a broad foundation for subsequent work in all sciences. Special attention is given to the physical features of the United States. Drawings, photographs, colored and relief maps, and specimens from the Museum and field work aid to make the subject clear.

Botany is taught by text-book and field work. A brief outline is first obtained of plant structure, physiology, growth, and reproduction. Lectures explaining special forms of vegetable growth, and the flora of this country, complete the work.

PHYSICAL CULTURE.

The health of the students is made a prime object of attention, and sanitary requirements are carefully observed. The Institute Gymnasium is furnished with Indian clubs, dumb bells, wands, rings, hoops, guns, wall pulleys, parallel bars, etc., and classes in Physical Culture are organized for the benefit of all students. The exercises practiced are such as tend to develop grace and strength. The Institute Campus of six acres furnishes facilities for exercises. Lawn Tennis and other outdoor games are encouraged and exercise in the open air is required.

Two hours a week in the Gymnasium during the winter term is required for all resident students, Juniors and Seniors of college excepted. No student will be excused from the required exercise except by order of the Director of Gymnastics. Special exercises are prescribed for students needing individual corrective work.

Every student while exercising in the Gymnasium must wear a gymnasium suit of the pattern prescribed by the Director.

TEACHERS' COURSE IN PHYSICAL CULTURE.

Swedish gymnastics, æsthetic gymnastics, light apparatus drill, playground work and games are taught. Lectures on health and hygiene are given throughout the year.

ÆSTHETIC CULTURE.

It is intended that the pupils of the Institute shall have the influence unconsciously received from painting, music, and refined surroundings, as well as direct instruction in Literature, Music, and Art. Special instruction in Music and Art is given in the schools devoted to those subjects.

SOCIAL CULTURE.

Pupils are trained to observe the usages of good society. Meetings of various organizations for improvement in Literature, Music, and Art and receptions in charge of the pupils add variety to student life. No effort is spared to give the pupils the advantages of a cultured home. The purpose is to develop the social life of the Institution within itself. Students are not permitted, during term-time, to visit in neighboring towns. The number of social functions during the term is limited, and the consent of the Dean must be obtained for each function at least one month before it is to occur.

RELIGIOUS TRAINING.

The Institute is distinctly Christian in its influence. Morning and evening Chapel in the Hall of the Institute building is attended by all students in the Institute Courses, special students, and women pursuing studies in the School of Music. College women living in the Institute attend evening Chapel.

Attendance upon Sabbath school and church services in town is required. All students have weekly recitations in Inductive Bible Study. The students have organized several classes for Scripture Study.

The Young Women's Christian Association, a voluntary society open to the officers and students of the Institute, meets weekly. The regular Tuesday evening prayer-meeting, missionary and temperance work, special Bible Classes, are in charge of this Association.

SPECIAL BRANCHES.

1. Italian and Spanish may be taken up as optional studies.

All optional studies must be pursued in connection with the regular classes.

2. Bible instruction is given once a week throughout the entire Course.

3. Essays are required of all students each month, and themes each week.

4. Two declamations are required of each student during each term.

5. Exercises in either Elocution or Reading are required once a week of all classes.

PUBLIC EXERCISES.

THE EXERCISES OF THE GRADUATING CLASS.

The Commencement Exercises of the Institute are held in the College Commencement Hall on Tuesday of Commencement week.

THE EXERCISES OF THE FOURTH YEAR CLASS.

The exercises of the Fourth Year Class, a combined musical and literary entertainment, are held in the Chapel of the Institute on the last Saturday evening in the month of April.

THE CONTEST IN ELOCUTION.

A contest in Elocution for the prize in that subject, open to all the members of the Institute, takes place in Bucknell Hall on the second Saturday evening in the month of May.

LOAN SOCIETY FOR WOMEN.

In June, 1887, there was organized in connection with Bucknell Institute an association for the purpose of assisting young women of limited means to obtain an education. A fund was established by gifts from the Alumnae and friends of the Institute. The money is loaned to beneficiaries, who obligate themselves to return it *without interest*, as soon after their graduation as they may be able. This fund is controlled by an Executive Board, who holds their annual meeting the second Tuesday in January.

During the last twenty-eight years eighty-six young ladies received aid. More than one half of these have returned the loan in full.

The annual meeting for the election of officers is held in January.

The payment of one hundred dollars constitutes the donor a Life Member of the Association.

Applications for loans should be made at or before the semi-annual meeting of the Board the second Tuesday in October.

Contributions should be sent to the Treasurer, Mrs. John T. Judd, Lewisburg, Pa. Any information will be given by the President, Mrs. Katherine B. Larison, Lewisburg, Pa., or Mrs. Llewellyn Phillips, Corresponding Secretary, Lewisburg, Pa.

DEPARTMENT OF ELOCUTION.

MISS EDITH SCHILLINGER.

MISS EUDORA REGINA HAMLER, A.B.

The aim of this department is the correct study of voice and body for the effective expression of thought and emotion. Special attention is given to voice culture, articulation, gesture and interpretative reading.

Semi-monthly recitals afford opportunity for platform work.

Particular attention is given to curing persons of stammering and other defects in speech.

The interpretation and the delivery of classics have a large place in the Course.

Special courses are offered to students who wish work along special lines of expression.

The Elocution Department offers a two-years' course leading to a certificate. All applicants for the regular course must have the equivalent of a high school education.

REGULAR COURSE IN ELOCUTION.

FIRST YEAR.

Physical Culture—Exercises for health, strength and ease.

Voice Culture—Exercises for tone production and voice development.

Interpretation of Plays and Readings—Study and practice, memory training.

The study and training in expression of eighteen dramatic selections.

Rhetoric.

Literature.

Articulation.

SECOND YEAR.

Physical Culture—Æsthetic and health exercises.

Study of Gesture—Pantomime, attitudes, posing.

The Coaching of Plays—Each senior must coach one play.

The study and dramatic training of eighteen classical readings.

The study of monologues and plays. Each senior will arrange and give one Shakspeare recital.

Philosophy of Expression.

Voice Culture.

Psychology.

Literature.

Story Telling.

THE ART DEPARTMENT.

MISS HELENA WAY.

The facilities for the study of Art have been greatly increased by the accommodations allotted to this Department, in a special studio, which provides such adjustments for admission of light, and unencumbered wall surface as to render it adapted for the execution and display of art production.

The Art Department offers two Courses leading to graduation for persons who wish to take the Art Course for culture, or for teaching, or for future work.

The regular Course as outlined below offers the foundation for fine arts such as are found in the leading art schools of the country and serve to cultivate appreciation of art and develop definite ability of execution.

The Illustration Course is outlined especially for persons desiring to study illustration as a special line, and much time is devoted to original composition.

Special lectures are given to the classes in composition wherein the pupils of both Courses present work executed outside of the studio of special subjects rendered, and receive individual criticism. This serves to develop originality, rhythm, harmony and expression.

Special Courses are varied to suit the requirements of different pupils, when the amount of time for work in studio is limited.

I. REGULAR COURSE IN ART.

FIRST YEAR.

Drawing—Geometric, still life and drapery and the antique, principles of perspective, proportion and light and shade, plant analysis, nature study, historic ornament and design.

Theory of Color—Color matching, and color harmony, thin oils, preparatory to water color.

Lectures—Composition.

SECOND YEAR.

Drawing—Antique and portrait.
Outdoor Sketching.
Mediums—Water colors, oils, and charcoal.
History of Art.
Lectures—Composition.

THIRD YEAR.

Drawing—Portrait and human figure, anatomy, outdoor sketching.
Mediums—Water colors, oils and charcoal.
Modeling—Human figure from clay.
Lectures—Composition.

II. ILLUSTRATION COURSE.

FIRST YEAR.

Drawing—Antique, portrait, human figure, perspective, proportion and light and shade, costume design.
Mediums—Charcoal, pastels, pencil, pen and ink, water colors and oils.
Lectures—Composition.

SECOND YEAR.

Drawing—Portrait and human figure.
Costume Design.
Lectures—Composition.

III. SPECIAL COURSES.

A. ARTS AND CRAFTS.

All work is based on original designs, using geometric, historic and floral motifs in oilcloth, linoleums, dress prints, wall paper, rugs, tiles, laces, embroideries, menu and place cards, including stencils, cut and tooled leather, pierced and hammered metal, basketry in raffia and reed work, and weaving.

Theory of Color—Color matching, color harmony.
Design.
Sketches of historic ornament.

Charges for instruction in Art are for all Courses \$12 per term or \$36 per school year.

Special individual instruction in Painting, \$1.00 per lesson.

All bills must be paid to the Registrar of the University, within the first ten days of each term.

Freehand Drawing is a part of the required work of the school.

ART EXHIBIT.

On Saturday, Monday, and Tuesday of Commencement week, a display of art products by the pupils of the School of Art is made in the Studio. At this time a committee of Art students receives and entertains all those who visit the Studio.

GENERAL INFORMATION.

ADVANTAGES.

The Bucknell Insitute offers to young women superior educational advantages. Its location in a University town assures an atmosphere of study and the benefit of numerous literary exercises, lectures, and addresses. The students in the Institute have the use of the Library and apparatus of the Institute, and also of the College, Astronomical Observatory, Chemical Laboratory, Museum and Library, and the various apparatus of the University. An isolated school could not provide for itself these advantages at a cost of less than a quarter of a million dollars.

During the year 1905 about forty thousand dollars were expended in enlarging and improving the women's buildings.

ADMINISTRATIVE AND OTHER REGULATIONS.

1. The general control of the Women's College, Institute, and School of Music is vested in the President of the University.

2. The government of the Institute, subject to such control, rests with the Dean.

3. Young women, whether attending the College, Institute, or School of Music, are subject to the rules and regulations governing young women attending the Women's College.

RULES.

The laws governing the Women's College are enacted by the Board of Trustees and a copy is given to each student when she enters the Institution.

Any officer of the Institute becoming cognizant of violation of regulations by any pupil shall report the same to the Dean, who shall make a record of the fact in a book provided for the purpose. Any second violation by the same pupil shall be reported to the President of the University; and if, in the judgment of the President of the University and the Dean, the offense be of sufficient gravity, the parent or guardian of the offending pupil shall be notified.

Violations of the regulations of the Women's College or infraction of the laws of morality are punished by private reprimand, deprivation of privileges, or private withdrawal from the Institution.

Summary punishment may be inflicted whenever the interests of the Institution demand it.

PRIZES.

I. BUCKNELL PRIZES.

The following prizes were founded by William Bucknell, of Philadelphia:

1. A First Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the best essay.

2. A Second Senior Prize, to be awarded to the member of the graduating class who, being excellent in scholarship during the Senior Year, shall prepare the second best essay.

For the year 1914 the First Prize of twenty-four dollars was awarded to Helen Lorraine Shaffer.

3. A Third Senior Prize is to be awarded to the member of the graduating class who shall attain the highest grade in the studies of the Senior Year. This excludes all grades of studies not in the Senior Year, all Senior Studies taken before the Senior Year, and all studies not taken in the Institute.

For the year 1914 this prize of twenty-five dollars was awarded to Helen Lorraine Shaffer.

4. A First Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the best Fourth Year essay.

5. A Second Fourth Year Prize, to be awarded to the member of the Fourth Year Class who, being excellent in scholarship during the year, shall prepare the second best Fourth Year essay.

For the year 1914, the first Fourth Year Essay Prize was awarded to Mary Magdalene Bubb; the second, to Elizabeth Ward Stephens.

The fund consists of \$2,000, the income from which is to be devoted to these prizes annually in a manner more particularly defined in the donor's communication to the Trustees.

Themes for the Bucknell Essay Prizes will be drawn from the following works:

For 1915 Shakspeare's Merchant of Venice, Scott's Marmion, Macaulay's Samuel Johnson, Milton's Comus, L'Allegro, and Il Penseroso.

II. THE ELOCUTION PRIZE.

A prize in Elocution is offered to the student who shall give the best recitation at the Annual Contest.

For 1914 the prize was awarded to Helen Lorraine Shaffer.

EXPENSES OF INSTITUTE STUDENTS.

I. Boarding Students. The regular charge for Boarding Students in the first four classes is \$290.00 per annum; for students in the Fifth Year General Course, and Domestic Science Course, the charge is \$325.00 per annum; the other expenses, spending money, books, and clothing, will vary with the individual student.

An additional charge will be made when one student occupies a double room alone in the Main Building. Extra charge will also be made for front corner rooms in the West Wing.

Students are charged extra for the washing of dresses, and for the washing of more than twelve pieces per week.

For the rooms in the Bucknell Cottage and in New Cottage there is an extra charge, depending on the location.

Students from a distance will save inconvenience by applying for a room before the term opens. A deposit of ten dollars is required when a room is chosen. This amount is credited upon the regular term bills. Should a student for good reason be unable to return, the deposit will be refunded, provided notice is sent to the Registrar not less than four weeks before the opening of the term for which the room is engaged.

Students will be charged for damage done to furniture or to the room they occupy.

II. Day Students. The charges for Day Students in the first four classes, all courses, amount to \$85.00 per annum; for students in the Fifth Year, General Course, and in Domestic Science Course, the charge is \$140.00 per annum.

III. Extra Studies. The charges for Elocution, Drawing and Painting, and Music will be found under those titles.

All bills must be paid within the first ten days of each term.

Checks and drafts should be drawn in favor of the Registrar of the University.

No bill will be made out for a shorter period than one term; and no deductions will be made, except in the charge of board, in case of a prolonged absence on account of sickness.

The expenses for Music, Printing, and other charges ordinarily

incurred at Examination and on anniversary occasions, are paid by the class or classes which incur the expenses.

The fee for Graduation and Diploma is \$5.00.

Free scholarships, covering tuition, are awarded to children of Ministers of the Gospel *in actual service*.

Tuition in the Institute classes is rated at \$36.00 per annum, except the fifth year, for which it is rated at \$50.00.

For information respecting the Institute, address the Dean of the Department for Women, Thomas A. Edwards, A.M., or the Registrar of the University.

BUCKNELL SCHOOL OF MUSIC.

INSTRUCTORS.

THOMAS ALPHEUS EDWARDS, A.M.,

DEAN OF THE WOMEN'S COLLEGE.

PAUL GEORGE STOLZ, A.M.,

DIRECTOR, VOICE, SCIENCE OF MUSIC.

CHARLOTTE G. ARMSTRONG,

VIOLIN AND HISTORY OF MUSIC.

HARRIET MAY HOLLINGSHEAD,

PIANO AND PIPE ORGAN.

MARY ELIZABETH SLEAR,

PIANO AND HARMONY.

PRISCILLA RICHARDSON HARDESTY,

PIANO AND MUSICAL APPRECIATION.

ETTA ALTHEA BROWN,

VOICE AND SIGHT SINGING.

NAMES OF STUDENTS.

FOURTH YEAR STUDENTS.

NAME.	COURSE.	RESIDENCE.
MARION RUTH BANCROFT,	<i>Piano, Theory.</i>	Altoona
MYRTLE BELLE BOWSER,	<i>Voice.</i>	Sunbury
MARY DECKER,	<i>Organ, Piano, Theory.</i>	Montgomery
ETHEL GALLOWAY,	<i>Piano, Theory.</i>	Lewisburg
CARRIE GRUGAN,	<i>Piano, Theory.</i>	Milton
RUTH HAINES,	<i>Piano, Theory.</i>	Winfield
ANNA LAURA HOLDEN,	<i>Piano, Theory.</i>	Corsica
MARGARET JACOBS,	<i>Piano, Theory, Voice.</i>	Milton
JEANETTE REED,	<i>Piano, Theory.</i>	Mifflinburg
MARGARETE STUCK,	<i>Piano, Theory.</i>	Milton
ETHEL CLUSH BRIGHT,	<i>Violin.</i>	Sunbury

THIRD YEAR STUDENTS.

SAMUEL ABRAMS,	<i>Piano, Theory.</i>	Milton
ALVIN JACOB ADAMS,	<i>Organ, Theory.</i>	Bellaire, Ohio
NELLE AUMILLER,	<i>Voice, Theory, Supervisor's Course.</i>	Lewisburg
MARGUERITE BANCROFT,	<i>Piano, Theory.</i>	Altoona

NAME.	COURSE.	RESIDENCE.
GEORGE THOMAS BENDER,	<i>Piano, Theory.</i>	Lewisburg
KATHERN BERGSTRESSER,	<i>Piano, Theory.</i>	Montgomery
CECIL BOYER,	<i>Piano, Voice, Theory.</i>	Vicksburg
JESSIE COOPER,	<i>Piano, Voice, Theory.</i>	Scranton
FLORENCE CRIPPEN,	<i>Piano, Theory.</i>	Watsontown
HELEN DENT,	<i>Piano, Theory.</i>	Northumberland
MARION DENTLER,	<i>Piano.</i>	Milton
MABEL DUNKELBERGER,	<i>Voice, Theory.</i>	Sunbury
MARGUERITE EVANS,	<i>Voice, Theory.</i>	Plymouth
LOUISE EVES,	<i>Voice, Theory, Supervisor's Course.</i>	Millheim
NALA WEBB FRIES,	<i>Voice, Theory.</i>	Lewisburg
NETTIE GORDON,	<i>Piano, Theory.</i>	Lewisburg
EDITH HORTON,	<i>Piano.</i>	Millville, N. J.
CHARLOTTE LANING,	<i>Piano, Voice, Theory.</i>	Bridgeton, N. J.
JENNIE McLAUGHLIN,	<i>Voice, Theory, Supervisor's Course.</i>	Lewisburg
CAMILLA BUNKER REED,	<i>Violin.</i>	Hollidaysburg
MARY FLORENCEE ROLLINS,	<i>Voice, Theory, Supervisor's Course.</i>	Altoona
MYRTLE SHIPMAN,	<i>Voice, Theory, Supervisor's Course.</i>	Sunbury
GEORGIA SNYDER,	<i>Voice, Theory, Supervisor's Course.</i>	Linglestown
MARY STERNER,	<i>Voice.</i>	Montgomery
THEO STUCK,	<i>Voice, Theory, Supervisor's Course.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
EDITH PAULINE SUPERKO,	<i>Piano.</i>	Nanticoke
ZERBA THERESA WEBER,	<i>Organ, Theory.</i>	Mechanicsburg
RUTH WILLIAMS,	<i>Voice, Theory.</i>	Taylor
HENRY CHARLES WOLFE,	<i>Violin.</i>	Lewisburg
MARIE YEISLEY,	<i>Piano, Theory.</i>	Mifflinburg

SECOND YEAR STUDENTS.

ROBERT ALBERT,	<i>Violin, Theory.</i>	Milton
RUTH BALLENTINE,	<i>Piano.</i>	Clarion
NELLIE BERIE,	<i>Voice.</i>	Lewisburg
DAVID NATHANIEL BOSWELL,	<i>Voice, Theory.</i>	Lewisburg
ELSIE BOYER,	<i>Voice, Theory.</i>	Pottsgrove
HELEN CHRISTINA BROWN,	<i>Voice.</i>	Morristown, N. J.
DR. HARRY CARTER,	<i>Voice.</i>	Montgomery
RALPH DENTLER,	<i>Violin, Theory.</i>	Milton
CHARLES FISHER,	<i>Voice.</i>	Ashland
MINNIE FASOLD,	<i>Piano.</i>	Sunbury
EMILE GEDRICH,	<i>Violin.</i>	Lewisburg
HELEN MARGARET GROFF,	<i>Voice.</i>	Washington, N. J.
HENRIETTA HEINSLING,	<i>Piano.</i>	Altoona
CLARA HINE,	<i>Piano.</i>	Lewisburg

NAME.	COURSE.	RESIDENCE.
OLIVE HUGHES,	<i>Voice.</i>	Montgomery
CATHRYN JENKINS,	<i>Voice, Theory, Supervisor's Course.</i>	Milton
ANNA LANGE,	<i>Piano, Theory.</i>	Milton
RAMONA LENINGTON,	<i>Violin.</i>	Scranton
FRED MOORE,	<i>Piano, Theory.</i>	Milton
JEANE PALMER,	<i>Voice, Violin, Theory.</i>	Montgomery
EDITH PETERSON,	<i>Piano, Theory.</i>	Lewisburg
ALVESTA REBER,	<i>Voice.</i>	Lewisburg
MAY REITZ,	<i>Piano, Voice, Theory.</i>	Winfield
MARION RIESS,	<i>Piano.</i>	Mercedes, Tex.
LOUISE ROBINSON,	<i>Violin.</i>	Milton
FLORENCE SCOTT,	<i>Piano, Theory.</i>	Milton
FRANCES H. SILBERSTEIN,	<i>Piano, Voice.</i>	Philadelphia
CHARLES AUSTIN SOARS,	<i>Voice.</i>	Norristown
SARAH STITZER,	<i>Piano, Theory.</i>	Mifflinburg
ELINOR STOUT,	<i>Voice, Theory.</i>	Wenonah, N. J.
HAZEL TULE,	<i>Piano.</i>	Milton
FOREST WALTER,	<i>Violin, Theory.</i>	Pottsgrove
MARY ELLEN WILSON,	<i>Piano.</i>	St. Charles, Minn.

FIRST YEAR STUDENTS.

OLIVE ANDERSON,	Monessen
<i>Piano, Theory.</i>	

NAME.	COURSE.	RESIDENCE.
NETTIE BARBER,	<i>Piano, Theory.</i>	Mazeppa
MARY BEATTY,	<i>Voice.</i>	Port Royal
RUTH BENDER,	<i>Voice.</i>	Milton
RUTH BERGSTRESSER,	<i>Organ.</i>	Montgomery
JENNIE BIRTH,	<i>Piano.</i>	Nescopeck
MABEL PAULINE BOYER,	<i>Piano.</i>	Mt. Pleasant
CLARENCE BROBST,	<i>Voice.</i>	Sunbury
ALBERT JOHN CLARK,	<i>Piano.</i>	Towson, Md.
GEORGE CHAMPION,	<i>Violin.</i>	Montoursville
CHESTER ESTLER,	<i>Voice, Theory.</i>	Boonton, N. J.
RALPH EVERITT,	<i>Violoncello.</i>	Watsonstown
NELLYLOU GARDNER,	<i>Voice.</i>	Oxford, N. J.
MERRILL FEAIRHELLER,	<i>Violin.</i>	Spring City
IRENE FRYE,	<i>Organ, Voice.</i>	Monessen
MARY HANKINS,	<i>Piano, Voice, Theory.</i>	Bridgeton, N. J.
MARIE ELIZABETH HARER,	<i>Voice.</i>	Blossburg
CARRIE HERMAN,	<i>Piano, Theory.</i>	Mazeppa
WILLIAM HOFFMAN,	<i>Voice.</i>	Tyrone
HAZEL INNS,	<i>Piano, Theory.</i>	Sunbury
AILEEN LARSON,	<i>Voice, Theory.</i>	Kane
MARY BELLE LEES,	<i>Violin.</i>	Juniata

NAME.	COURSE.	RESIDENCE.
ESTHER MABEL McCORMICK,	<i>Violin.</i>	Tyrone
HAROLD McCULLOUGH,	<i>Voice.</i>	Washington
CECIL McCOLLUM,	<i>Piano, Theory.</i>	Lewisburg
MARJORY McNALL,	<i>Piano.</i>	Muncy
HELEN MORGAN,	<i>Voice.</i>	Milton
JANNETTE CAROLYN OWENS,	<i>Guitar.</i>	Lewisburg
JOY TILLMAN PROSS,	<i>Piano.</i>	Lewisburg
STEPHEN PUFF,	<i>Voice, Theory.</i>	Philadelphia
MARTHA RANK,	<i>Piano.</i>	New Columbia
SAMUEL SASSO,	<i>Voice, Theory.</i>	Milton
MARY SHOWALTER,	<i>Voice.</i>	Milton
IVA STRAW,	<i>Piano, Theory.</i>	Lewisburg
GRACE ISABEL SUTTON,	<i>Voice.</i>	West Newton
MARY TATE,	<i>Piano, Theory.</i>	Allenwood
STELLA WAGNER,	<i>Piano, Theory.</i>	Mazeppa
MARGARET WALLACE,	<i>Piano, Voice.</i>	Palmyra, N. J.
BEATRICE WEAVER,	<i>Piano.</i>	Lewisburg
META WHYTE,	<i>Voice, Piano, Theory.</i>	Philadelphia

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GRADUATES, 1914.

NAME.	RESIDENCE.
ETTA ALTHEA BROWN,	Morristown, N. J.
MYRTLE BELLE BOWSER,	Sunbury
WILMA H. S. KNAPP, B.A.,	Hawley
MAME KRAMER,	Muncy
EVA REINHARDT,	Taylor
ALFRED S. VAN OSTEN, B.A.,	Philadelphia

COURSES OF STUDY.

The School of Music is under the general supervision of the Dean of the Department of Women, but has its own corps of instructors, each a specialist in his line. The Courses are designed to afford every needed facility for the study of Vocal and Instrumental Music. An ample supply of instruments from the best makers is provided for practice.

INSTRUMENTAL MUSIC.

COURSE FOR THE PIANO-FORTE OF FOUR YEARS FOR GRADUATION.

The pupil is required to pursue the most thoroughly approved modern system of technical training. After the first rudiments have been mastered, the Course of instruction leads to the practice of *études*, designed to unite with purely technical drill the requirements of artistic style and expression.

PIANO.

FIRST YEAR.

Musical Exercises and Gymnastics to prepare the hands for playing; Gurlitt, *Technic and Melody*, Book I; Kohler, *Practical Method*; Lebert and Stark, *Instruction Book*, Part I; Loeschorn, Op. 84 and 65; Kohler, Op. 157; Duvernoy *School of Mechanism*, Op. 120; *Études* by Biehl, Lemoine, LeCouppey, Bertina and Czerny; introductory technical work; Sonatines, Kuhlau, Clementi, Schytte; pieces by Behr, Bohm, Lange, Lichner and others.

SECOND YEAR.

Heller, *Studies*, Op. 45, 46 and 47; Loeschorn, Op. 66; Czerny, Op. 299; Bernes, Op. 61; Easier Mozart, Haydn, Beethoven Sonatas;

Little Preludes by Bach; Bach Inventions, Scales, Arpeggios and other technical work continued; Salon pieces by Bendel, Kullak, Merkel, Nevin and other composers; preparatory octave and chord work.

THIRD YEAR.

Czerny, Op. 740; Cramer, 50 Studies; Clementi Gradus ad Parnassum; Moscheles, Op. 70; Bach Suites, Handel Suites, Scarlatti pieces, Beethoven Sonatas; introductory Chopin work; compositions by Grieg, Godard, MacDowell, Moszkowski and others; continued octave and chord work.

FOURTH YEAR.

Bach Preludes and Fugues; Italian Concerta; Chromatic Fantasy and Fugue; Kullak Octave Studies; Selected Chopin Études; Liszt Studies; Beethoven Sonatas, Op. 53 and 57; other compositions by Chopin, Liszt, Schumann, and selected works by Tausig, Moszkowski, Saint-Saens, Brahms and Rubinstein.

The outline is necessarily quite elastic and will adjust itself to the individual ability, requirements and purposes of each student.

COURSE FOR PIPE ORGAN.

The study of the Pipe Organ is generally pursued by students well advanced in piano. The Course is designed to provide a thorough education as choirmaster and organist, and provides for a training in all that pertains to intelligent performance of church music, voluntaries and the art of accompaniment; also a systematic drill in technics, registration and improvisation.

FIRST YEAR.

Stainer's Organ Method. Registration.

SECOND YEAR.

Dudley Buck's Short Preludes and Fugues. Organ solos of various styles.

THIRD YEAR.

Sonatas by Merkel, Bach and Mendelssohn, Preludes, Toccatas and Fugues.

FOURTH YEAR.

Each Senior Must Register for Full Course.

Sonatas by Guilmant, Rebuke. Symphonies by Widor. Bach's Advanced Works.

COURSE FOR THE VIOLIN.

The Course is based upon:

The methods of Wohlfahrt, Schubert and others for elementary students; the first part of De Beriot's School; Thirty-six Studies, Kayser; De Beriot's Second and Third Positions; Mazas Etude Specials; Hermann's One Hundred Studies; Violin School, Ovide Musin; Bowing Studies, Casorti; Forty Studies, Kreutzer; Thirty-six Études, Fiorilla. Pieces and solos by the best writers for the instrument are used throughout the Course to develop style, phrasing, etc. Sonatas by Beethoven, Gade, Grieg and others, and concertos of Rode and Viotti are required for graduation.

COURSE FOR THE VIOLONCELLO.

Instruction for this instrument is based upon:

Méthode Pratique pour de Violoncello, par S. Lee; studies by Piatti and Romberg.

COURSE FOR THE VIOLA.

Bruni's Methods and Studies, by Campagnoli.

COURSE FOR CONTRABASSO (DOUBLE BASS).

Bottesini's Method.

VOICE CULTURE.

COURSE OF FOUR YEARS FOR GRADUATION.

Careful instruction is given in the use of the voice, and the correct manner of producing purity of tone. To secure control over the voice and gain for it flexibility, fullness, and durability, thorough drills are afforded in such technical exercises as:

Lamperti's and Vannuccini's Italian Methods, Vocalises of Sie-

ber, Conccone, Lütgen, Vaccai, Bonaldi, Bordogni, Marchesi, and Ponafka; Lamperti's Studies in Bravura Singing. For expression and the development of a pure style, practice is afforded in singing the best English, German, Italian, and French Songs, Operatic Arias and Solos from the Oratorios.

Careful instruction and drill are given in sight-singing; and all students seeking to complete the Course in Voice Culture are expected to acquire reasonable proficiency in this branch of the art of music.

COURSE IN HARMONY.

The study of Harmony is included in the other musical work, and a sound knowledge of its principles is required of all graduates of the School of Music. The text-books used are: Bussler's Harmonic Exercises, Homer Norris's Practical Harmony, Richter's Counterpoint, and Reicha's Course of Musical Composition, or equivalents.

THE ORCHESTRA.

CLASSES FOR ALL ORCHESTRAL INSTRUMENTS.

Students who are sufficiently advanced in any of the above musical instruments will have opportunity of practice in string quartettes, trios, concertos, and symphonies of Beethoven, Mozart, and Haydn.

SUPERVISOR'S COURSE IN PUBLIC SCHOOL MUSIC.

This course provides in a systematic manner the best teaching methods, together with a thorough drill in sight reading, ear training and harmony; also gives actual practice in conducting the classes. In most of the public schools the regular grade teachers instruct the pupils under the supervision of a Supervisor trained for the work. The purpose of this department is training for such supervision; by instructing pupils how to teach others to teach sight-singing.

RECITALS.

Frequent recitals in the presence of the faculty and students of the School of Music and their friends are held to accustom students to playing in public, and for mutual improvement.

On the Friday evening prior to Commencement week a public recital of the School of Music is held in Bucknell Hall.

The public examination of those who desire certificates of proficiency is held in Bucknell Hall the Saturday afternoon before commencement. At this time each pupil plays or sings two pieces of high grade, and reads an essay on some subject connected with music.

TUITION.

Tuition is charged for instruction in music, per annum, as follows:

	<i>Full</i> <i>Course.</i>	<i>Half</i> <i>Course.</i>	<i>Quarter</i> <i>Course.</i>
Vocal	\$80.00	\$45.00	\$25.00
Piano or Organ.....	80.00	45.00	25.00
Violin	80.00	45.00	25.00
Supervisor's Course in Public School Music	80.00	45.00	25.00
Harmony, in private lessons.....	80.00	45.00	25.00
Harmony, in Class.....	25.00	....	....
Guitar and Mandolin, in Class.....	20.00	....	....
Use of Instruments for Practice Two Hours			
Daily	12.00	....	....

Special individual instruction in music, per lesson, \$2.00.

Full course implies two one-hour lessons per week, and theory.

Half course implies two half-hour lessons per week, and theory.

Quarter course implies one-half hour lesson per week, and theory.

No reduction is made except in case of protracted illness.

Instruction in the orchestra and in harmony is free to pupils otherwise studying music.

Payment strictly in advance at the beginning of each term.

RESIDENCE OF MUSIC PUPILS.

Pupils in music reside in the Women's College and are under the care of the Dean of the Department for Women. Students pursuing any of the Institute courses can also take studies in music. Those who wish to make music a specialty are recommended to take at least one study each term in Language or Literature.

The regular charges for pupils in music, residing in the Institute, including one literary subject per term, are \$235 per annum. This *does not* include charges for instruction in music, which are determined by the number of lessons taken per week.

GRADUATION IN MUSIC.

Students who complete any of the Courses in Music and pass the examination, receive a certificate of proficiency. Students will not be taken as Seniors in Music until they have passed an examination before a committee consisting of members of the faculty and other appointed judges. Besides the examination before the Committee for admission to the Senior Class, students will be required to pass a preliminary examination at the opening of the spring term, and a final examination before Commencement week. Students will not be admitted to the final examination unless they have passed the preliminary examination.

THE AVIRAGNET PRIZE.

Friends of the late Elysée Aviragnet have endowed a prize for excellence in Music. For 1914 this prize was divided between Mame G. Kramer and Etta Althea Brown.

GENERAL REGULATIONS.

Young ladies attending upon the School of Music are subject to the administration and other regulations enacted by the Board of Trustees for the government of students in the Women's College. Students of Music are also entitled to all the privileges of the Women's College.

For information respecting the School of Music, address the Dean of the Women's College, or the Director, Paul G. Stolz, A.M.

UNIVERSITY CALENDAR

1915.

SPRING RECESS.

Second Term Ends,.....	Wednesday, March 17
Third Term Begins,.....	Wednesday, March 24
Sermon before the Christian Association,.....	Sunday, April 4
Declamation of the Third Form, Academy,.....	Saturday, April 10
Exercises of the Fourth-Year Class, Institute,..	Saturday, April 17
Contest in Elocution, Institute,.....	Saturday, May 1
Exhibition of the Junior Class, College,.....	Friday, May 7
Examinations,.....	Tuesday to Friday, June 11
Exhibition, School of Music,.....	Friday, June 11
Baccalaureate Sermon,.....	Sunday, June 13
Sermon before the Education Society,.....	Sunday, June 13
Examinations for Admission to College,.....	Monday, June 14
Meeting of the Alumnæ of the Institute,.....	Monday, June 14
Annual Meeting of the Trustees,.....	Tuesday, June 15
Annual Meeting of the Alumni,.....	Tuesday, June 15
Graduation of the Fourth Form, Academy,.....	Tuesday, June 15
Graduating Exercises of the Institute,.....	Tuesday, June 15
Oration before the Alumni,.....	Tuesday, June 15
ANNUAL COMMENCEMENT, the 65th,.....	Wednesday, June 16

SUMMER VACATION.

Fall Examinations for Admission to College,	Wednesday, September 15
First Term Begins,.....	Thursday, September 16
Election of Class Officers, 3 p. m.,.....	Friday, September 17
Reception by Christian Association,.....	Saturday, September 18
Matriculation,	Tuesday, November 23
Thanksgiving (recess of three days),.....	Thursday, November 25
First Term Ends,.....	Friday, December 17

1916.

Second Term Begins,.....	Tuesday, January 4
Second Term Ends,.....	Wednesday, March 22
Third Term Begins,.....	Wednesday, March 29

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Franklin Printing Company
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